The Bradshaw Lecture

ON

MYXŒDEMA AND ALLIED DISORDERS.

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MR. PRESIDENT AND GENTLEMEN,—The pathology of myxœdema, so far as it is at present known, will doubtless form a part of the lectures which Dr. George R. Murray of Newcastle will deliver before this College next year. In the present lecture I propose to devote my attention mainly to the clinical aspect of myxœdema, its recognition, its differential diagnosis, and its treatment.

Diagnosis.—The primary diagnosis of the disease is not always so easy as might be expected from the observation of well-pronounced or typical cases. This is true, indeed, of all kinds and manner of disease. Whatever be the disease it is necessary, in the first place, whether we do it consciously or not, to construct a picture of such disease in its full development, including, first, the main and most important symptoms, then, next, the less frequent and less characteristic symptoms, and, thirdly, accessory symptoms of varying value in various cases. Such a picture cannot be constructed by making a mere list of symptoms. It is necessary, by careful comparison of a considerable number of cases, and also by bestowing careful regard on the relations of symptoms to etiology, to make the picture a carefully shaded one—to put into strong relief that which is most important, and that which is less and less important further and further in the background. The picture must, in a word, have its perspective and its colouring carefully drawn and filled in. Such a process, carried on in a more or less methodical manner, must be applied to the separation in our minds of diseases and of their subjects from one another before we are able to write down the primary naming of any disease of which there may often be many forms. As the knowledge of myxœdema grows by the addition of new cases to our original list it becomes evident that around our well-defined picture are to be found forms more or less obscure, in part because of incomplete development of the whole series of symptoms and in part also by reason of curious modifications of myxœdema constituting alliances with diseases to which the term "myxœdema" cannot with propriety be applied.

Classification of symptoms.—Let us now endeavour to make a classified list of the signs and symptoms of myxœdema. The first lines which we draw in firmly in limning the disease are those connected with the external appearance of patients, such as the increase in the size and bulk of the whole body, due, evidently, in part to changes in the skin, in part to changes in the subcutaneous tissue. Next, the changes in the skin affecting more or less the whole surface and determining changes in the appendages of the skin, in the hairs, in the glands, and in the organs of touch. In correlation with the changes in the skin we have to take note also of altered states of mucous membranes resembling those observed in the skin and leading again to destruction of appendages, such as the teeth and glandular structures. It is here a point of much importance to remember that the swelling of the skin and mucous membranes is not an ordinary dropsical swelling, does not in any way gravitate from the upper parts of the body to the lower, and does not in any part pit on digital pressure but is firm and resilient. Next comes a group of symptoms indicating in various ways impairment of the functions of the nervous system; such as slowness in muscular movement and tardiness in response to impressions made upon the surface of the body, slowness in thought and action, weakening of memory, disturbance of the balance of muscular actions in the limbs. With these we must associate the quality of the speech and the sound of the voice perfectly typical of the disease and dependent apparently on the combined effects of the swelling of the lips and fauces, of failure of the movements of the muscles within the swelling, and of default of nervous power in controlling the action of muscles. Further, beyond the above-mentioned signs of dilapidation we may find various degrees and kinds of mental aberration and certain mental phenomena which may be fairly called "peculiar" up to a certain point.

Symptoms of the second degree.—The next in the rank of important signs may, I think, fairly be taken to be the lowering of the temperature of the body—rarely, if ever, absent when the disease is fully pronounced. A less common symptom than those already enumerated is the tendency to hæmorrhage following comparatively slight injury, the hæmorrhage being most commonly in the skin or mucous membrane, but sometimes in internal organs. Partly with special regard to etiology we have to consider the question of sex, noting that the affection is very predominantly one of the adult female. In all diagnoses negatives have to be marshalled among sources of help. We shall find that there is no affection of the viscera which can be called characteristic of myxœdema, although in the course of the disease visceral affections may arise, chiefly from the operation of external and new causes, not wearing, so to speak, the uniform of the higher groups. After passing in review the components of the several groups of symptoms and conditions above classified, the relations of the thyroid body assume great importance, seeing that certain changes in that body and its functions are in effect causative of myxœdema. Another set of changes belong to other diseases which in this aspect have some sort of alliance with it and help us to its explanation. We may now amplify the elements of each group of symptoms in succession.

Details of symptoms.—The often vast and quivering bulk of the body is, I have already said, partly brought about by alteration in the skin and partly by developments of fat beneath the skin. It is doubtless often also due in part to alterations in the muscles and viscera, all partaking of the nature of the change most readily noticeable in the skin. The skin is found to be everywhere dry and often in many parts is clearly very much thickened in its epithelial layer as well as in the derm. It is exceedingly rough and harsh to the touch, so that, as a patient once remarked, you might almost strike a match upon it—an experiment which, I may say, I have never yet attempted. The varying connexions of the skin with the deeper tissues involve considerable variety in the appearance of the swollen parts. For instance, the loss of natural expression is at once forced upon one's notice. The skin on the checks and forehead is very obviously translucent, dry and firm to the touch, but not nearly so harsh to the rubbing touch as elsewhere. Both upper and lower eyelids are much swollen and the upper lids droop heavily over the eyeballs. They are almost transparent and look at first sight like the eyelids of persons suffering from acute renal disease, but they do not in the least present any pitting on pressure. As a result of the drooping of the upper eyelids the eyebrows are mostly raised in various degrees, sometimes to a very considerable extent, by the effort to elevate the upper lids above the level of the pupils. The alæ nasi are generally particularly thickened and translucent, giving rise to a broadening of the whole nose. The upper and lower lips alike are so swollen as to destroy the natural expression of the mouth and to reduce it to little more than a chasm between the inflexible margins. The ears are usually both very much enlarged and thickened. The total effect is that of a mask of sorrowful immobility. There is in this a remarkable resemblance of myxœdematous patients one to the other.

In examining the body one of course generally takes note at once of the condition of the thyroid body, although this has no direct relation to the state of the skin. On each side of the neck above the clavicles are usually found large soft projections. Sometimes they are called "dough-like," but they are not plastic like dough and convey to the touch the same kind of sensation which might be yielded by a large ripe tomato imbedded beneath the skin. These projections, as you know, are partly fat, partly changed connective tissue, and possibly in part veins. They are, as you know, also very characteristic of that modification of myxœdema which is observed in sporadic cretinism. The abdomen is usually particularly large and often pendulous. In the hands and feet, most noticeably in the former, the changes in the skin determine a great thickening and coarsening of these members. In the hand the digits while swollen are much flattened out and when the hand is

extended no spaces separate one finger from another. The resulting conformation of the hands has been aptly called by the late Sir William Gull "spade-like." The altered hands lose, like the face, what we may call the natural expression, and lose also their delicacy of movement. Among the earliest manifestations of the disease is a change in the hair, which becomes rough, loses its natural lustre, and breaks very readily, becoming after a time very ragged and very intractable in the toilet. The hair thus altered speedily falls off both from the head and from the eyebrows—not before, however, the latter, if well developed, have passed through a stage of raggedness which is brought into prominence by their raised position. The eyelashes undergo similar disfiguration, are always much broken, and often are lost altogether. The hair over the body also dwindles and falls off, and the nails, although they rarely go so far as to complete atrophy, are wasted and brittle. It is, perhaps, mostly in the hands and feet that the extreme roughness of the skin is most developed, the highest degree of this change occurring on the sole and the heel.

Mucous membranes.—All visible mucous membranes exhibit alterations parallel with those of the skin. In the mouth it is evident that the swelling of the lips is very much compounded of mucous membrane. The cheeks project in between the teeth, are marked by them, and are very apt to be bitten. The tongue is very large and generally very anæmic. In the fauces we can see the changes of mucous membrane generally most pronounced. The uvula and soft palate press down upon the tongue as a somewhat firm, very translucent, and imperfectly moveable mass. Similar changes may be seen in the vulva and vagina. The teeth almost invariably undergo impairment of nutrition, sometimes becoming brittle and falling to pieces and sometimes coming out whole without much obvious alteration in structure. The gums are usually greatly swollen and yet recede from the teeth, tending to become ulcerated and to bleed on the very slightest provocation. The most obvious explanation of the decay of the hair and teeth and of the dryness of the skin is to be found in an extreme swelling of and change in the connective tissue in the skin and mucous membranes. The connective tissue becomes firm and resistant, ultimately encroaching on the pulp of the teeth, on the follicles of the hairs, and on the sebaceous and sudoriparous glands. Whether these changes in the connective tissue be in part of neurotrophic origin is a question to be considered, but at present not fully capable of answer. It is important, however, to know that under certain treatment, hereafter to be set forth, the skin, losing its swollen character, resumes its functional activity, and the hair frequently returns also in a healthy form over what have appeared to be bald surfaces. The swelling of the body is, however, not always uniform or constant. It may and usually does appear most strongly in the face and supra-clavicular regions. It may, however, be found in the limbs or in the abdomen before involving the face and neck. It may in early stages disappear altogether for a time, or it may be transferred from one region to another. The face is particularly subject to alterations in the amount of swelling, generally in association with changes in symptoms, more especially nervous symptoms—disappearance being followed by headache or neuralgia and recurrence by relief of these conditions.

Nervous and muscular changes.—Tactile sensation all over the body is in typical cases diminished. This can doubtless be explained in part by the alteration of the connective tissue in and around nerve-endings, but it is also in some cases clearly traceable to defect in the central receiving nervous system. The defect of sensation is, of course, particularly noticeable in parts which depend for much of their usefulness upon very delicate and sensitive nerves. The fingers notably lose not only mobility but also accurate sense of touch, which is very plainly demonstrated when a patient endeavours to fasten or unfasten a button or pick up a pin from the floor. There is also a tendency to drop things held in the hand. Not only, however, is the sense of touch blunted, but the recognition by the central perceptive organs of impressions made upon the periphery is distinctly retarded. In certain circumstances the skin entirely loses sensibility in parts. A lady whom I have seen recently and who presents fairly typical myxœdema has from time to time sudden increase in the swelling of the feet and hands, accompanied by a complete loss of sensation over restricted areas of no particular form. When, as happens from time to time, the swelling passes away sensation is restored to the same condition as in the rest of the body. We may find, therefore, both bradæsthesia and anæsthesia in myxœdema. The special senses are sometimes affected, particularly the sense of smell and the sense of taste, offensive odours being complained of where no signs of such odours appear to be present and tastes of excessive sweetness or acidity or bitterness—most commonly the sweetness—being present in the mouth.

As regards the muscular system, there is in all cases a marked debility and tendency to ready exhaustion by exertion, sustained action of muscles evidently using up their power very rapidly. The complaint of excessive muscular weariness is one of the next which we have to listen to, and sometimes the failure of muscles leads to very distressing results. Patients sometimes are unable to keep the head erect. For the most part, both in the erect and sitting posture, the head falls forward with the chin on the upper part of the chest and cannot be restored to its proper position without assistance from the hands either of the patient or of a nurse. Sometimes the head when restored to its position or a little beyond the proper position falls backward with a rapid movement enough to cause anxiety as to the occurrence of injury consequent upon the jerk. Such loss of balance in the movements of the muscles supporting the head seems to exist throughout the whole system and is readily noticed in the gait of well-marked cases. I have seen this most often of course in women, who are the most frequent victims of the disease. If asked to walk they rise from the sitting to the erect posture with a somewhat tremulous effort; they sway somewhat in standing, and in walking present a quivering of all the muscles of the body, particularly of the legs, with each step. Their movement in walking is such as might be expected to attend great nervous excitement with difficulty to restrain it, and is not altogether without a suggestion of stateliness, such as might be represented upon the stage. Not infrequently the want of coördination in flexors and extensors which leads to this quivering movement goes so far as to determine sudden falls, not caused by the feet coming in contact with obstacles, but by giving way of the knees. The patient falls suddenly into a kneeling position and often experiences serious injury, sometimes even incurring fracture of the patella. This form of nerve weakness may persist even after the disappearance of the main symptoms already noted.

The speech of the myxœdematous patient is, so far as I know, unlike any other modification of speech in disease. There is an obvious difficulty, in the first place, in getting words out of the mouth. They seem to stick at the lips and their ultimate pronunciation is accompanied by either a writhing of the upper lip or by a puffing, explosive jerk of the word through the chasm between the comparatively immoveable lips of the patient with advanced disease. The quality of the voice is nasal and leathery, the tone is monotonous, and at the same time speech is frequently interrupted by little explosions through the nostrils. The words uttered, although somewhat blurred, are usually correctly framed and, for the most part, accurately represent what is in the mind. Sometimes, however, patients still state that they have words in their mind which they are unable to put into speech. In spite of the slowness and painfulness of utterance the patients are disposed to talk at great length. Once started in conversation they tend to go on indefinitely. I have known a patient talk continuously for an hour or even more without interruption save for drawing the breath at frequent intervals and without taking apparent notice of a remark or question intended to break the prolonged monologue. In connexion with speech it must be remarked that the patients in many cases write letters also at great length, and that as a rule the handwriting is good and monotonously regular, the difficulties already mentioned in respect of the movements of the fingers not appearing to interfere with the use of pen or pencil. The voice, which I have tried to describe, with its monotonous flow and leathery intonation, is, once heard, almost in itself a ground for diagnosis of the whole disease. It has occurred to me to hear a patient speak outside the door of my consulting-room and to recognise the disease before I had actually seen the subject. It has occurred also under my observation that patients in hospital under treatment for myxœdema would detect in the voice of a newcomer the existence of the

malady and would say, "That's my disease." The imperfections in speech are not always so complete as in the typical cases which I have described. It sometimes happens that the elocution is only comparatively slow and the existence of a difficulty is fully understood only after treatment. Then it is frequently found that the patient naturally speaks very quickly and with excellent elocution, which has only been modified in a minor degree. It is, of course, obvious that not infrequently the loss of teeth complicates matters and increases the difficulty of articulation. If the treatment of myxœdema in any case be successful natural speech is gradually resumed, but while the mechanical obstacles appear to pass away completely the tendency to garrulity for the most part persists, so that the physician has still to listen to a long setting forth of comparatively small matter recited volubly and with interminable iteration. That the state of the nervous system is much concerned in this alteration of speech is, I think, abundantly clear. It is perhaps only the first to attract our notice of many nervous symptoms. In some cases to the difficulty of speaking a difficulty in swallowing is added. The swollen state of the fauces and of the mucous membrane beyond would make us ready to expect some difficulty, but at times dysphagia of considerable severity together with affection of inspiration will lead to a suspicion of affection of the medulla oblongata.

Changes in the mind.—It has been noted already that the aspect of the patients is lethargic. A considerable number are actually lethargic and unnaturally placid, but it is very common to find, even early in the disease, indication of the disturbance of mental equilibrium. The most common of all is the gradual development of a suspicious frame of mind. This is not, as a rule, a suspicion of conspiracy or of intent to do harm on the part of the people around the patient, but a constant idea that all such people regard the patient unfavourably and are finding fault. This may be developed so far as to make the patient actually violent and to cause him to protest against the injustice of the supposed attitude of the persons around; and I have seen patients so terrified by the sensation of dread of some ill-defined malignant influence that they have tried after getting out of bed to throw themselves from windows or down stairs. It is also interesting to observe that some people who are not suspicious of others are suspicious of themselves and spend their time in moaning over their sins and shortcomings, although these cannot be stated in any clear or definite form. Some years ago a patient under my care at St. Thomas's Hospital very well illustrated such conditions. She was a woman of more than middle height, was enormously swollen, and weighed over 20 st. She was afflicted particularly with *cacoëthes loquendi*, and was full of suspicions about everybody who had to deal with her as well as about the rest of the patients in the ward. They were all thinking evil of her and no one expressed any sympathy for her sufferings. When I paid my visits to the ward she often detained me for half an hour with the endless recapitulation of her sufferings, suspicions, and fears. One night, under the influence of great excitement, she actually fell out of bed, receiving, however, no obvious injury. One day, after I had been enduring her loquacity for some time, I was passing on to see another patient when she sat up and reviled me and all present on account of the want of interest shown in her. It occurred then to one of my clinical clerks to take an opportunity of letting her talk herself out. He sat by her bed and listened patiently to her as long as she was able to continue speaking. This lasted for more than an hour and a half. She immediately took a great fancy to him and said that for the first time she had been properly understood. This was before the days of the use of the thyroid treatment, but the patient certainly improved during a long stay in hospital and left weighing only 13 st. I attributed her improvement to prolonged rest in bed, the maintenance of warmth, and the use of jaborandi. A few months afterwards she appeared in the ward one afternoon during my visit. She was still further reduced in bulk, weighing then only about 15 st.; but, while she talked a great deal, her change of mental attitude was quite remarkable. She, indeed, came mainly to apologise to me and to the nursing staff for her rudeness during her stay in hospital. She had known all the time that she was rude and unreasonable, but she was quite unable to repress the feelings which prompted her to rudeness. The case was valuable as illustrating the licence in which persons of unsound mind will sometimes indulge, being fully aware at the time that their conduct is unjustifiable. She did not make her appearance again in the hospital—at least, in my ward. Mental improvement following a distinct abatement of the signs of disease has been observed in this case as well as in some others. On the other hand, the suspicions and the garrulity often remain the last symptoms to be overcome. In fact, in some cases they are actually exaggerated in persons who have lost all the other characteristic signs of the malady.

In more than one case the mental disturbance has become so great as to require restraint. Taken in conjunction with alterations in the thyroid gland all the materials for a direct diagnosis of myxœdema are to be found among the foregoing symptoms, but there certainly are cases of myxœdema in which for one reason or another certain of the symptoms may be absent or modified. Thus, for instance, as Dr. George R. Murray has recently shown, instead of the marked swelling of the whole body, a relative tumefaction, accompanied by a yellowish tinge of the skin varying under treatment, would render the first-sight diagnosis a little obscure. The speech is often not characteristic, even when the other parts of the picture stand out well, and the hair and teeth may escape the ordinary degeneration. I have seen recently a woman whose hair at the age of sixty years was almost, if not quite, natural, being abundant in quantity, not having fallen out, and not being broken or ragged. The teeth, however, in this case had gone early. There are, indeed, cases in which it must be admitted that diagnosis is very difficult; cases in which, while the bulk of the body is very considerable and the face much swollen, the yellowish, transparent look of the skin is not present, the speech is but little impaired, and the hair and teeth have suffered only in a minor degree. Some of these cases are not easy to separate from cases of simple over-fatness of the body, and it is only by dint of repeated verification that the existence of symptoms belonging to myxœdema and not to simple fatness may be determined. In the early identification of myxœdema its subjects have much the appearance of being really victims of a form of Bright's disease without albuminuria, and, indeed, after some of the early publications of observations on myxœdema, it was seriously contended by more than one accomplished physician that the disease really was Bright's disease associated with an unusual form of dropsy. The compass of this lecture will not allow of my entering into the details of the controversy, but I think that no one nowadays has any doubt of the absolute difference between Bright's disease and its dropsy and myxœdema and the swelling belonging to it.

Associated symptoms.—We can now proceed to consider some of the associated symptoms of myxœdema, not of such primary importance as the preceding.

Temperature of the body.—First among these is the lowering of the temperature of the body. In the well-established disease the temperature of the body is usually lowered by from 1° to 3° F. Such lowering of temperature, however, is not by any means always present in the early stages. The heat of the body may be maintained at something like the average temperature or a little above it by the influence of intercurrent disease, particularly that of phthisis. Indeed, an average temperature, say of 94° or 96° observed in a case of well-developed myxœdema may be taken to be an indication of a sort of pyrexia calling for the most careful search for any local or general causes, such as in ordinary people raise the temperature to 100°, 101°, or more. It will be seen afterwards that one of the first effects of the successful treatment of myxœdema is the raising of the temperature. Related no doubt to the lowering of the temperature, we find patients liable to great suffering and aggravation of their symptoms during the prevalence of cold weather. This is certainly the rule, and one may notice in hospital how our old patients come back to us with the frosts. They do not appear so much to feel the cold as to be conscious of the injurious effects of cold. One may see a patient sitting up in bed and complaining of feeling ill because of the cold weather. The hands and feet will often be found then to be extremely cold and blue and yet it is far from uncommon to find the complaining person allowing her nightdress to be open so that the air directly impinges upon the skin, and careful questioning will elicit the fact that the patient is not conscious of such impact of cold air, the general numbing of sensation masking the effects of a prejudicial influence. Independent of various modes of treatment, climate must be regarded as very strongly modifying the progress of the

illness. The people who can have well-warmed houses and keep out the cold of our English climate pass through the winter with much less suffering and danger than poorer people unprovided with such protection. Still more, if people can exchange our English climate for a warmer one during the winter season the progress of the disease may be retarded and the sufferings greatly diminished. Observations of temperature must be made by insertion of a thermometer into the mouth or into the rectum. Axillary determinations may be regarded as practically valueless.

Hæmorrhages.—Hæmorrhages from various parts are, as we have noted, not uncommon in myxœdema, though far less general in their occurrence than the alteration in temperature. They occur mostly in the fully established disease. Epistaxis and bleeding from the gums will often be noted. The extraction of a tooth, often called for, is always to be dreaded on account of the hæmorrhage which is apt to follow, lasting in some cases for three or four days in spite of plugging and the use of styptics and involving a drain which the anæmic patient can with difficulty sustain. Hæmorrhages in the skin and from the bowels are less common, but uterine hæmorrhage is often a serious source of enfeeblement, becoming dangerous in association with parturition. Post-partum hæmorrhages are far from uncommon in even the early stages of the disease to an extent almost becoming a rule when the relatively small number of myxœdematous patients who become pregnant is considered. The most serious hæmorrhages are those into the brain. I have seen three cases of apoplexy in two of which post-mortem examination showed bleeding into the brain in the usual position of cerebral hæmorrhage, and in the third in a curiously distributed form in the cortex of the brain. In the last-mentioned case I had the opportunity of watching the progress of the patient for a considerable time. He was a man, aged thirty years, a waiter by occupation, and was admitted for the first time to St. Thomas's Hospital under my care on June 14th, 1892. It appeared that his illness commenced six years before his admission. He began at first to feel dull, heavy and depressed, and became clumsy, especially with his hands. His friends complained of his dull and muffled voice. All exertion became a trouble and he would occasionally fall. His abdomen and body generally began to swell and his face became round, puffy, and yellowish-brown with flushed cheeks, earning for him the nickname of "the fat boy in Pickwick," which replaced the nickname of "Skin and Buttons" which had before the illness been bestowed upon him on account of his pale and hollow-eyed countenance. His hair had begun to fall out some time before admission and his skin was always very dry. He stated that he was rather worse in the winter than in summer time and that he had lost interest in the outside world. He was conscious of being very irritable. At the time of admission his skin was exceedingly harsh and dry, also much pigmented; his hair was dry, scanty, and broken, particularly on the face and head. His features were heavy, his expression was somewhat fatuous, and there was a strong suggestion of his having undergone a sort of Mongolian change of physiognomy. He was very bulky; there was some fulness about the clavicles; the thyroid gland could be felt but was evidently smaller and firmer than natural. All his movements were sluggish, and his hands were spade-like, with impairment of the finer movements. There was no sign of visceral disease and the urine was normal. Glycerine extract of thyroid, prepared after the admirable method of Dr. George R. Murray of Newcastle, was injected hypodermically in doses of 15 minims on the following dates:—July 12th, 16th, 19th, 22nd, and 30th. He improved considerably under this treatment, which was, however, discontinued on account of great swelling and distress following the injections and was replaced by internal administration of the same preparation in the same doses daily. Under this treatment improvement continued to be rapid; his bulk diminished, his skin became moist, and at times he perspired very considerably. His hair grew again very quickly and in great thickness. A photograph presenting his condition after six weeks of treatment was taken for me by an exceedingly clever clinical clerk of mine, who wrote on the back of it the very appropriate quotation from the "Ingoldsby Legends":

> "He grew sleek and fat;
> In addition to that
> A new crop of feathers
> Came thick as a mat."

Only we must pass over the fact that the patient did not, like the jackdaw, get fatter. The patient left the hospital on August 28th, 1892, but continued to attend as an outpatient for some months afterwards, taking the glycerine extract regularly, but only now about twice a week. His attendance soon became irregular. He appeared to have taken up service as a waiter. I learned at the time that he was a very good waiter in a general way, but was somewhat expensive in consequence of a tendency to drop plates and dishes when he was handing them. It is certain, however, that at this time he began to indulge in alcoholic stimulants, and to have neglected his thyroid treatment. The signs of myxœdema gradually returned and at the beginning of July, 1895, he had a fit in which he lost consciousness for some hours and this was followed by a second and a third fit during that year. In the last of these the tongue was bitten. He was again admitted to St. Thomas's Hospital on Nov. 13th, 1895. Much of the appearance presented at the time of his first admission had now returned and his urine now was of a specific gravity of 1028, with a trace of albumin. Shortly after his admission he was seized with convulsions and was unconscious for one hour. On Nov. 14th he had two fits, after which he became very violent, struggling and talking incoherently. He sweated profusely all the next day and was still very violent, requiring restraint by a male attendant. He then became comatose for some hours and died on Nov. 16th. The temperature, which had been 98·2 at the time of his admission, rose on Nov. 13th to 100·6°. At the post-mortem examination the thyroid gland was found to be very small and flabby, the isthmus being little more than a strand of connective tissue. It is important to state that the adrenals were diseased, the left being increased in size by enlargement of the central cavity, which contained several calcareous and caseous nodules, some surrounded by miliary tubercles. The right adrenal showed a similar change, but with all this the mass of glandular tissue was unaffected; there was now no pigmentation of the skin. On examining the brain there could be seen through the arachnoid and pia mater innumerable minute hæmorrhages dusted, as it were, over both hemispheres, but more numerous on the left side. The cortical vessels were much distended and the brain throughout was hyperæmic, but there were no petechiæ below the surface. Otherwise the brain appeared to be healthy. As regards the hæmorrhages noted on the surface of the brain it must be remarked that in his convulsions and struggling he had evidently met with some injury of the scalp, but the distribution of the petechiæ and their superficial character were most probably either the result of his epileptic fits or the cause of them. It is well known that petechiæ occurring in the face of children are not unfrequently found to be the result of convulsions and that occasionally their existence may lead to the recognition of fits occurring during the night and not in the daytime.

Changes in the thyroid gland.—It is now generally admitted that myxœdema, in common with the sporadic cretinism of children and cachexia strumipriva, is dependent on a destruction or loss of the function of the thyroid gland and that in many ways myxœdema is allied to cretinism in which affections of the thyroid gland play an important part. It is commonly the case that in myxœdema diminution of the thyroid glands is recognised during life; not, however, always, by reason of the difficulty of feeling the thyroid through the massive and unyielding cutaneous tissue. For the most part the gland is found in a state of atrophy, having the secreting structure partially or completely destroyed by a fibrosis of connective tissue, there being also an associated loss of the colloid secretion. But it is not always a reduced thyroid that is found. In an enlarged gland the destruction of the tissue may be brought about by a new growth; and, furthermore, the history of a certain number of cases of myxœdema indicates that an enlargement of the gland has preceded its contraction and atrophy. To go further than this, it may be stated that in certain well-observed cases the symptoms presented before the establishment of myxœdema have been more or less the symptoms of exophthalmic goitre. It appears to me probable that we shall recognise in the future more and more the occurrence of a stage of hypertrophy of the thyroid gland, with or without the signs of Graves's disease, as an antecedent of myxœdema.

I will venture to give here an abstract in as short a form as possible of a case the notes of which have been kindly sent to me by Mr. Alex. Hope Walker of Cranleigh, whom I beg now to thank for his kindness. It is, of course, helpful to me to have the opportunity of quoting the cases

of other observers as well as my own. The patient was a woman, aged twenty-three years, living at Alfold in Sussex, a place where, according to Mr. Walker, goitres are frequent. Being hitherto in the enjoyment of fairly good health she noticed in July, 1890, that her neck was larger than usual, though neither pain nor inconvenience was experienced from the enlargement. In March, 1891, she began to present signs of exophthalmic goitre, and was subsequently admitted in June of that year to Charing-cross Hospital under the care of Dr. John Abercrombie. The diagnosis of exophthalmic goitre appears to have been formed and adopted at the hospital, where she was treated with iron, quinine, and digitalis, together with daily galvanisation of the thyroid. Under this treatment the swelling became reduced in a somewhat marked degree, and she left the hospital on August 1st, 1891, to all appearance cured. She then went into service at Burgess Hill and continued well until November, 1893, when she noticed her legs, arms, and hands to be swelling. She finally gave up her service and returned to Alfold, where she was seen by Mr. Walker on Nov. 20th, 1894. At that time, to quote Mr. Walker's notes, "the face throughout was markedly swollen, the skin feeling thick, looking translucent and waxy, and the eyelids were particularly swollen. The nose was broad, the lips were thickened and diverted, the face was devoid of all expression; the pink flush, so constantly present in these patients, was absent; the hands were spade-like; the skin was harsh, dry, and pale; the hair was falling out, the speech was slow and monotonous, the temper was sulky and uncertain, the movements of the body were all very slow and deliberate, the urine and the viscera appeared to be normal, the thyroid gland could just be felt." I think you will agree with me in accepting the first stage of this patient as one of exophthalmic goitre and the second as one of myxœdema. I may add that the treatment was mainly by the administration of thyroid in the form of tabloids. By the end of January, 1895, she appeared to be quite well, but being at home she neglected to send for her tabloids and drifted back into her myxœdematous condition. She was recovered from this once or twice by renewed treatment, but finally she died rather suddenly from heart failure on June 6th, 1897—that is to say, seven years after the first appearance of symptoms connected with the thyroid. No post-mortem examination was made so far as I am aware. It appears probable that the enlargement of the thyroid in such a case, as, indeed, in exophthalmic goitre generally, is due partly to hyperæmia and partly to changes in the gland which are apt in certain cases to determine proliferation of the epithelium surrounding the cells, such proliferation ending in the replacement of the true glandular structure by fibrous materials and consequent destruction of the functions of the gland. The gland being thus destroyed after a time undergoes a sort of cicatricial contraction, leading to atrophy comparable to that occurring in cirrhosis of the liver.

I am inclined to think that the succession of enlargement of the thyroid, with or without the typical signs of Graves's disease, is much more commonly an antecedent of myxœdema with contracted thyroid than is generally supposed. In my own experience, and probably in that of many other physicians, young women brought for treatment on account of anæmia and various nerve disorders are found much more commonly now than formerly to present some enlargement of the thyroid. Doubtless with the phenomena of myxœdema and exophthalmic goitre brought more and more prominently before our notice we have come to take more careful note than formerly of the state of the thyroid gland. It is certainly common to find a definite increase in the size of the gland present where neither the parents of the patient nor the patient herself were conscious of anything of the kind. I do not mean to say that in all these cases the enlargement of the thyroid is followed by atrophic change, but the great frequency of the occurrence of enlargement in adult women justifies the hypothesis that in a much larger number of cases than we know of at present an enlargement of the thyroid has preceded the development of myxœdema. How this enlargement comes about is certainly not well understood as yet, but it must be remembered that in the first place myxœdema, like exophthalmic goitre, is a disease affecting women in an exceedingly larger proportion than men. In fact, the title to Sir William Gull's first paper brings this predominance into strong relief. The title of the paper was "On a Cretinoid State supervening in Adult Life in Women." Temporary increases and diminutions of the size of the thyroid body are certainly not easy to recognise and determine, but certainly where a thyroid is once enlarged it is often found that there is increase of enlargement at the time of the menstrual period. When, as in many women, conditions approaching the inflammatory occur in various parts of the body at the time of menstruation it is no hasty induction if we suppose that a local exaggeration of such conditions may lead to a permanent enlargement, to be followed by simple subsidence or possibly in some cases by contraction. I know of no changes in the sexual organs of men in any way related with myxœdema where it attacks them and *primâ facie* I should not expect to find such a relation, there being in men no periodical disturbance comparable to those of menstruation. In sporadic cretinism, which is really only myxœdema occurring in childhood, the affection of the two sexes appears to be about equal, boys and girls alike in those cases being affected by developmental error. It is only after the full development of the sexual organs that the disproportionate implication of women becomes evident. So far as I know the occurrence of sexual development in sporadic cretinism, for the most part very delayed, does not affect the further course of the disease in either sex. The boy and the girl suffering alike from their myxœdema carry it on with them equally when they respectively become man and woman.

In relation to the points which have just come under discussion I may draw attention to an exceedingly interesting paper read by Dr. George R. Murray at Edinburgh in July last on the Diagnosis of Early Thyroidal Fibrosis. The object of this paper is to draw more attention to a class of cases of early disease with partial disablement of the thyroid gland, which are more common than is generally supposed. Dr. Murray points out that the symptoms in these cases are not yet sufficiently well recognised and he regards the symptoms to be the result of a certain amount of atrophy of the glandular tissue of the thyroid with fibrosis, but he does not think it desirable to discuss the question as to the possibility of fibrosis being primary and leading to atrophy of the secreting epithelium as a secondary result or to fibrosis as a secondary condition following atrophy.

Treatment.—Under the head of treatment it must first be observed that until the introduction by Dr. Murray of the practice of making hypodermic injection of a glycerine extract of the thyroid gland no remedies could be spoken of as effective. Arsenic and iron were suggested by the very obvious presence of anæmia, and each in its way often produced some improvement in the general health of the patients. The hypophosphites were used where the nervous weakness was particularly evident and jaborandi or the salts of pilocarpin were used in order to favour the occurrence of perspiration. In addition to the use of drugs the introduction of portions of thyroid gland into the tissues of the body has been used by several observers. Some found a resting place for the gland in the peritoneal cavity, others in the tissues beneath the skin. I may say that I myself have made use of the latter method in several cases, choosing a spot over the upper part of the pectoralis major muscle where the portion of the thyroid gland could be deeply embedded in subcutaneous tissue. In all cases some improvement rapidly followed the operation; the skin began to be moist, the patient's face to fine down, and the hair recovered somewhat of its healthy character, but in no very long time it could be ascertained by the touch that the embedded gland was diminishing in size and at length it had disappeared. With its disappearance passed away also all the signs of improvement. I suppose that it is just possible that by regular repetition of the process some thing like cure might have been effected, but I do not know that anyone has performed the operation more than once or twice, the difficulties of such a proceeding being very obvious. It must be stated that the embedded glandular structure was taken from a goitre just removed by operation.

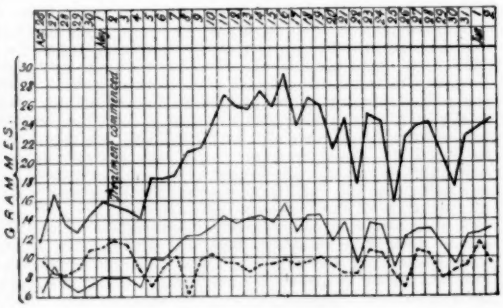
As I have already observed, after Dr. Murray had made his important discovery Dr. Hector Mackenzie found that the internal administration of the gland or its preparations brought about as marked an improvement and progress to cure as had been effected by the hypodermic injections, and I suppose that the internal administration of the thyroid gland in one way or another is the method of treatment now usually adopted. It appears to me that the administration of the thyroid gland itself when it can be carefully and

regularly maintained is the most appropriate form of treatment. The gland may be finely minced and administered raw with sugar or salt or may be lightly cooked. The size of the gland, mainly obtained from the sheep, varies a good deal and such variation is to some extent a justification of the administration of an extract obtained from a number of glands so as to get something like an average. In one case still under my occasional notice an affectionate husband has been at the trouble to procure regularly thyroid glands from sheep and to prepare them in a raw state for administration to his wife. The original quantity administered was one gland a week, but as the patient has improved the frequency of administration has been diminished, but it still goes on as it has gone on for some years and at the present moment the woman presents no signs whatever of the disease. It is possible to give the thyroid gland too frequently. When the knowledge of its efficacy as administered internally first became known I gave to a patient, who was so ill as hardly to present any chance of maintaining life, one gland a day for four days in succession. At the end of that time she suffered from violent headache, vomiting, and pains in the limbs with a rise of temperature amounting to 6° F. With such a lesson the gland was administered at longer intervals—namely, of from a week to ten days—with ultimately the greatest benefit. But to procure fresh and healthy glands and to prepare them in the proper way involves a great deal of trouble and their use may be replaced by the administration of Dr. Murray's glycerine extract in doses varying from ten to thirty drops a day, or every second or third day, according to the effects produced and to the patient's power of bearing the influence of what we may call now the drug. Still more convenient and not ineffective are the preparations in the form of tabloids now in common use. Some of these contain the dried and crushed gland, others extracts of it, such as the excellent powders devised by Mr. Edmund White, B.Sc., the pharmaceutist of St. Thomas's Hospital. On the whole I prefer the extracts of the whole gland to any kind of principle derived from it by chemical processes. Perhaps the next best form is the dried and powdered gland of the Pharmacopœia.

A good deal of extremely interesting work relating to preparation has been done by various observers, and I would draw your attention to "Observations on the Chemistry and Action of the Thyroid Gland," by Dr. Hutchison, Demonstrator in Physiology at the London Hospital Medical College. According to Dr. Hutchison and others colloid matter prepared in various ways from thyroid gland is found to contain a definite quantity of iodine, which appears to be present in the form of what has been called "iodothyrin" (Bergmann). We may note in passing that according to Dr. Hutchison parathyroids when administered in myxœdema have no effect upon the disease, although in operations on dogs no myxœdema occurs if the parathyroids are not removed as well as the thyroid.

The urine.—For the most part the urine in myxœdema contains no albumin, certainly not as a rule until the disease has lasted a very long time, often not at all from beginning to end. Where albumin, however, is present regularly in the urine, together with casts and degenerated epithelium, we may regard it as an indication that the kidney has undergone an internal change comparable to that observed in the eyelids, where the glandular tissue is injured by the encroachments of swollen connective tissue. In post-mortem examination the kidneys are found somewhat enlarged and exceedingly tough, reminding one in their consistence very much of the kidney of advanced heart disease. This change in consistence is associated with excessive thickenings of the connective tissue around Malpighian bodies and between the tubes—changes at first sight very like those of the contracting granular kidney. In the case of the young man who died with cerebral hæmorrhage some increase of interstitial tissue in the kidneys with great degeneration of epithelium, especially that of the convoluted tubes, was noted. Further, as regards the urine three things have long been observed as occurring in the treatment of myxœdema by the administration of thyroid. First, the urine below the average quantity before the administration was very largely increased in the first days of treatment. Secondly, the quantity of urea present in the urine before treatment, long known to be very deficient, amounting often to less than half of the proper excretion in that fluid, was found under the treatment to be very much increased in quantity, to a point even above the average. Thirdly, the temperature of the body was found to rise with more or less rapidity from the subnormal range present in the disease to either the normal height or beyond it. After selecting a well-marked case of myxœdema I obtained the valuable assistance of Mr. White. The constituents of the patient's daily diet and of the urine were regularly submitted to chemical examination a week before treatment. At the end

Chart and Table illustrating Changes in Excretion of Urea and Nitrogen after Treatment.



Excretion of urea.
Excretion of nitrogen.
Ingestion of nitrogen.

Average daily excretion of urine and its constituents.	Before treatment.	After treatment.	Increase after treatment.
Volume ... ... c.c.	928	1127	199
Total solids ... ... grms.	26·16	36·49	10·33
Ash ... ... ,,	7·37	8·84	1·47
Organic matter ... ... ,,	18·79	27·65	8·86
Urea ... ... ,,	14·21	22·36	8·15
Nitrogen ... ... ,,	7·39	12·08	4·69
Phosphoric acid ... ... ,,	2·78	3·33	0·55
Chlorine ... ... ,,	1·71	2·01	0·30
Average daily ingestion of nitrogen in food ... grms.	9·46	9·30	—

of the week the administration of the thyroid in the form of the glycerine extract of the sheep's gland was begun. It was found then that while the weight of the body diminished rapidly during the first week of treatment the daily volume of urine passed rose from 928 cubic centimetres to 1127, being an increase of 190 grains; that the total solids increased from 26·16 grammes to 36·49; the organic matter from 18·79 grammes to 27·65 grammes; the urea from 14·21 to 22·36 and the total nitrogen from 7·39 to 12·08 grammes, there being also a distinct increase in the quantity of phosphoric acid and chlorine. It was clear, therefore, that the thyroid extract had: (1) a distinct diuretic action; (2) that the elimination of nitrogen was largely increased; and (3) that the increased elimination of nitrogen was almost entirely in the form of urea. These results appear to indicate that during the process of the melting of the myxœdematous deposit there occurs some important metabolism of a nitrogen-containing substance. These observations were brought before the Clinical Society of London some years ago.

In conclusion, I may be permitted to say that myxœdema presents for us great interest in the matter of its primary diagnosis; that it presents for our consideration many problems besides those connected with its own etiology and course and its relations with other diseases in which affection of the thyroid is present; and that in its pathology there are also many points to be investigated and explained. I have dealt only lightly with its pathology for the reason which I have already given—namely, that the setting forth of this before you will presently be found entrusted to more skilful hands.

A Clinical Lecture,

BEING

SOME DETAILS IN POSTERIOR GASTRO-ENTEROSTOMY, WITH TWO SUCCESSFUL CASES.

By ARTHUR E. BARKER, F.R.C.S. Eng.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY AND PROFESSOR OF CLINICAL SURGERY AT UNIVERSITY COLLEGE AND SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—The operation of *posterior* gastro-enterostomy being yet on its trial it appears desirable that all details which may facilitate its rapid and accurate completion should be carefully studied. If the procedure is ever to be of real use it must be shown to involve but little risk to the patient. Only in this way will it come to be employed either for cancerous or cicatricial stenosis of the pylorus at a stage when it is most likely to be of real service. Hitherto it has been reserved almost exclusively for desperate cases and consequently the mortality has been high. This latter point, again, has deterred many from employing the measure even in those cases where it would have given great relief from suffering and if successful have prolonged life. This is, of course, equally true of the anterior method as well as of the posterior. But I venture to think that we have been inclined to assume too easily that because the mortality from the first-invented anterior method has been high that therefore the *posterior* method, which appears at first sight to be more difficult, would be higher. This does not necessarily follow. As a balance to the assumed difficulty of the posterior operation we have in it the absence of several of the well-known risks of the anterior method, and notably of the kinking of the bowel and the tendency if a button is used that the latter will fall into the stomach. Statistics do not help us much in estimating the relative risks of the two procedures, inasmuch as the figures available in regard to the older method include many cases done while the procedure of gastro-enterostomy was in its infancy and was consequently imperfect and more dangerous. The figures relating to the much newer *posterior* method, on the other hand, are taken from a period in which surgical technique has undergone immense improvement and the mortality of all operations has greatly fallen. But this much may be said, that some operators of large experience who in the past have done many anterior gastro-enterostomies are now giving it up in favour of the posterior method. And one, Professor Carle of Turin, writing at the beginning of this year, claims to have done his last 23 posterior gastro-enterostomies consecutively without a death, and puts his gross mortality at 3·8 per cent. for non-malignant cases. It may be objected to this series that it only contains non-malignant and consequently less severe cases. But, on the other hand, it probably gives a better idea of the intrinsic risks of gastro-enterostomy *per se* than one including malignant cases, many of them probably operated on in the last stages of an exhausting disease. But if anything like Professor Carle's success comes to be the rule, and a mortality of from 3 to 5 per cent. is all that has to be feared, one of the strongest reasons against timely operations for gastric disease will no longer exist.

But for such results great attention will be necessary to every detail, in addition to the careful selection of cases. Foremost among these will come the preparation of the patient by careful washing out of the stomach beforehand. This should never be omitted and should be carried out for some days anterior to the operation. Next to this comes the cleansing of the skin of the abdomen. For this purpose I am inclined to depend, in addition to plentiful soap and water, chiefly upon washings with methylated spirit and carbolic acid, 1 in 20, alternately if possible, for at least forty-eight hours before the operation. Then the retention of warmth in the patient comes next. My own method to this end, employed for years past, is to envelop the patient from head to foot in hot wool secured by bandages, both now always sterilised beforehand by steam. In cold weather hot bottles are placed round the patient on the operating table.

But it is to some of the details more immediately connected with the actual operation that I think attention deserves specially to be called. In the first place there appears to be a growing conviction among those who have the largest experience of plastic surgery in the abdomen that the less germicides are applied to the peritoneum the better for the result. Every irritant applied to the peritoneum is a most powerful depressant. Fully impressed with this view I have for a long time past carefully abstained from the use of any antiseptic within the abdomen in these cases and have been content to see that everything coming in any way in contact with the viscera is carefully sterilised by heat. Plain, sterile, warm dry gauze has taken the place of carbolised sponges and so on. If fluid for washing is required, which is rare, it is simply plain boiled water. Then special care is required by all and every means to save time and the manipulation of the abdominal contents. Much may be done in this direction by preparation of all detail before the abdomen is opened and much may subsequently be done as well. But in the first place it is very desirable to make the initial incision as small as possible until the exploration of the condition of the stomach has been completed. It is hardly ever necessary to make in the first instance an opening in the muscular wall of more than 2 in. The skin wound may be double that length. But with one or two fingers in the abdomen the stomach can in most cases be explored adequately, and during this exploration there is a minimum of exposure of the viscera and very little chance of prolapse of bowel. Of course, if this opening is not sufficiently large it can be increased with scissors. As a matter of fact, in the class of patients who require such operations emaciation is usually marked, and both exploration and the subsequent operation can be carried out through a relatively small abdominal incision.

And now I desire to call attention to two small modifications of the usual operation which I know will save much time and a good deal of unnecessary manipulation of the field of operation. And first let me say that, although by no means an enthusiastic believer in the wholesale use of Murphy's button, I think that in this particular case of *posterior* gastro-enterostomy it has great advantages. Its use certainly makes an operation which without it is very difficult and tedious comparatively easy and short. And, besides, some of the objections to its use in the anterior operation have less weight in the posterior. Two drawbacks to the use of the button in the *anterior* operation occur at once to any surgeon who has done many of these operations. One is the probability that the button will fall back into the stomach rather than pass into the bowel. This has been known to occur in several cases. It can be explained both by the weight of the metal body tending to drag it back from its position in the anterior wall of the stomach into the cavity of the viscus and from the narrowing of the jejunum due to the dragging of the colon preventing the button from passing into the gut. But when the button is placed in the posterior wall of the stomach behind the colon and in the jejunum behind the latter, where it does not kink, the contractions of the stomach and gravity both tend to carry it into the gut, which is at its greatest size and in no way displaced.

But again I have to note two small details in the method of applying the button in the posterior operation which I observed in my last two gastro-enterostomies, which I think materially shorten the procedure and further minimise the chance of the button falling into the stomach. The first is Professor Carle's method of closing each viscus round the central tube of the button, which differs materially from that recommended by Dr. Murphy. The incision in each viscus was made only just large enough to get the button into each. Then, instead of the usual purse-string suture round the edges of the opening to close it on the central tube Professor Carle simply puts a stitch at each end of the slit by Lembert's method and so reduces it. This saves much time, as he says, and as I know from my own cases, and is equally effectual. It also saves much handling and dragging of the parts.

The next point to which I wish to draw attention I have not seen noticed elsewhere. It is a departure from von Hacker's procedure in his operation. He recommends that when the stomach has been reached through a slit made in the transverse meso-colon it should be secured there by stitches before being made to anastomose with the jejunum.

Now I believe that this stitching, although I have done it in my own operations, may be dispensed with altogether where the button is used. That this will save much time is obvious. In my last case the operation had lasted seventeen minutes before this stage had been completed, the whole procedure lasting thirty-six minutes. From what I have seen in the last two cases I have operated on I believe that all that is necessary is to make a small hole in the meso-colon and draw the posterior wall of the stomach through it to a sufficient extent to give room for the insertion of the metal button. When the latter has been placed in position it will prevent the stomach from slipping back through the slit in the meso-colon and there will therefore be no reason for stitching the latter to the stomach. There might be some fear perhaps that the funnel of the stomach-wall thus made might be strangled by the edges of the hole in the meso-colon did we not know that under similar conditions where the stomach is drawn out through small apertures in the most recent operations for gastrostomy no strangulation takes place. In my first posterior gastro-enterostomy, though the stomach-wall was tightly grasped by the hole behind the button, no evil result followed and the button was passed on the fourteenth day, the patient making a perfect recovery. In my last case of the posterior operation done with the same button I stitched the stomach to the meso-colon. But though the patient made an uneventful recovery and the button was passed on the twelfth day I could see that I had lost at least ten minutes in putting in stitches in a very inaccessible part which might have been avoided. Everything which gets rid of the necessity of stitching within the abdomen appears to me to deserve a very careful consideration as a means of saving time and the irritation of manipulation.

In conclusion, I may say that I was struck with the very small amount of general disturbance produced by the posterior operations as contrasted with a much larger number of anterior gastro-enterostomies which I have done. The operation in every way left a very favourable impression on my mind. And if further experience shows that it can be done in a still shorter time and with equally rapid and satisfactory recovery we may hope that many sufferers may be relieved at a much earlier stage of their ailments than has hitherto been the case. The cases are briefly as follows.

CASE 1.—A patient, aged fifty years, was sent to me by Mr. Smith of Tavistock with a history that he had just arrived from Italy. He had been a healthy man until some six or eight months before, when he began to suffer from dyspeptic symptoms accompanied by pain and great dilatation of the stomach. Some seven years before he had had somewhat similar symptoms but had recovered and become very stout, weighing usually about 15 st. The last attack was followed by rapid emaciation, so that when I saw him he only weighed 10 st. 8 lb. He had been treated by careful dieting and washing out of the stomach daily and under this treatment the dilatation of the organ disappeared but with increasing weakness. No tumour could be made out. In the uncertainty as to diagnosis an exploratory operation was done on Aug. 27th, 1898, in which I discovered a hard, thickened pylorus, possibly cicatricial, but presumably carcinomatous. I turned up the colon, made an opening in the transverse meso-colon, and united the stomach through this to the first part of the jejunum about 18 in. from its origin. Murphy's button was used, as above described. The patient bore the operation, which lasted fifty minutes, well. He was troubled for the first two or three days by regurgitation of bile from the mouth. After this he had no trouble and soon began to put on flesh at the rate of 3 lb. every two days. He left the nursing home looking well and very cheerful, having passed the button on the fourteenth day.

CASE 2.—A man, aged forty-eight years, was admitted into University College Hospital in the last week of September, 1898. He was much emaciated and suffered severely from pain and dilatation of the stomach and there was a tumour to be felt in the pyloric region. Here I did the operation of posterior gastro-enterostomy precisely as in the previous case but more rapidly, finishing it completely in thirty-six minutes. The stenosis was undoubtedly cancerous. The patient was none the worse for the operation, was fed from the first, and soon began to put on flesh rapidly. He had no bad symptom of any kind and returned home on Oct. 26th, 1898, without any of his old pain and eating ordinary food. The button was passed on the twelfth day.

A FURTHER CONTRIBUTION TO THE SURGERY OF STONE IN THE BLADDER,

BASED ON A RECENT SERIES OF CASES IN HOSPITAL AND PRIVATE PRACTICE.

BY REGINALD HARRISON, F.R.C.S. ENG.,
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FROM time to time I have passed under notice[1] and compared with my own experience various processes which have in recent years been employed in the treatment of stone in the bladder and have endeavoured to illustrate their applicability to individual cases in practice. The record of additional cases which forms part of this paper will enable me to offer some further remarks on various points still open to consideration. The cases here referred to have all been operated upon by me either in hospital or private practice during the interval of 1890–97 and include every instance thus dealt with during this period. It will be convenient to divide my subject-matter into three parts: (1) a tabulated record of all my operations during the period referred to, with special reference to litholapaxy as the procedure now generally adopted; (2) observations relative to the prevention and treatment of recurring stone; and (3) some remarks on certain operations for stone in the bladder which may be regarded as supplementary to litholapaxy.

I.—A TABULATED RECORD OF OPERATIONS DURING THE PERIOD 1890–97, WITH SPECIAL REFERENCE TO LITHOLAPAXY AS THE PROCEDURE NOW GENERALLY ADOPTED.

To proceed with my first division it will be seen on reference to the table of cases that it comprises 101 litholapaxies, 3 perineal lithotrities by my method, 2 suprapubic lithotomies, and 4 median lithotomies, making a total of 110 persons operated upon.

Litholapaxy.—Since 1878, when I was in Boston and spent some time with Bigelow watching his earlier operations by this process, which he was then developing, I have continued to practise it, using with but slight modifications the appliances which I showed for the first time in England at the annual meeting of the British Medical Association in 1878[2] on my return from the United States. No more striking testimony to the completeness of Bigelow's work could be found than the fact that the instruments of his day, after a lapse of over twenty years, have undergone no important change. It is rare to find an invention so perfect in its initiation as this in all its details. On reference to the table of cases it will be seen that 6 of the 101 litholapaxies terminated fatally. 1. A man, aged sixty-five years (No. 6), who was operated upon successfully on the first occasion, died on the third day after the repeated operation which was performed thirteen months subsequently. The kidneys were extensively involved in suppurative nephritis. The stone was a phosphatic one weighing close upon 2 oz. The repetition of the operation had clearly been delayed too long. 2. A man, aged sixty years (No. 13), died on the twenty-eighth day after operation from chronic suppurative nephritis and syncope. 3. A man, aged seventy-two years (No. 32), died on the sixth day after operation from pelvic cellulitis probably due to suppuration within a vesical sac or pouch. 4. A man, aged fifty-four years (No. 70), who was operated upon successfully on the first occasion, died after a similar operation repeated fifteen months subsequently from suppurative nephritis caused by a chronic urethral stricture which had gradually contracted. Had on the second occasion a perineal lithotrity with division of the stricture and drainage of the bladder and ureters been practised he would have had a better chance of recovery. The patient derived so much relief from the first operation that he wished it repeated on precisely the same lines. 5. A man, aged sixty-two years (No. 88), died on

[1] Observations on Lithotomy, Lithotrity, and the Early Detection of Stone in the Bladder (Churchill, 1883). Surgical Disorders of the Urinary Organs (4th Edition, Churchill, 1893). Diseases of the Bladder in Twentieth Century Practice of Medicine (Wood and Co., New York, vol. i., 1896).

[2] Brit. Med. Jour., vol. ii., 1878

the tenth day after operation from extensive suppurative nephritis consequent on a urethral stricture of some years' standing. He was much exhausted from many weeks' travelling under painful circumstances. 6. The remaining fatal case was that of a man, aged seventy-six years (No. 92). He died on the twenty-ninth day after what promised to be a very successful operation. A large urate stone was crushed and evacuated, the dried fragments of which weighed 975 gr. The prostate was much enlarged. The calculus had previously caused him great pain and the operation afforded complete relief from this. He died from senile decay. Of the 101 different persons included in the table and who were submitted to litholapaxy 23 were known to have one or more recurrences for which I treated them on subsequent occasions. One man (No. 17), I heard, had a second stone successfully removed by another surgeon by a suprapubic cystotomy about twelve months after my operation. In these 23 persons who had recurrence of stone after crushing I repeated litholapaxy once in 13 of them, twice in 2, thrice in 1, four times in 1, five times in 1, six times in 1, nine times in 2, and ten times in 2, making a total of 174 litholapaxies in 101 individuals with six deaths as previously detailed. In several of the repeated operations the proceeding resolved itself into occasionally removing from the bladder calculous concretions with the aid of the lithotrite and aspirator, much on the same principle as the dentist removes tartar which has collected about the irregularities of the teeth. These occurred for the most part in elderly men with atonic bladders who were more or less dependent on their catheters and possessed but little power of voluntary expulsion. To submit these cases to a cutting operation for the purpose of removing the concretions and draining the bladder could not be recommended, as during the intervals, sometimes extending over many months, they enjoyed fair, and even active, health. For instance, in case No. 1 the patient, whom I first operated upon early in 1890 and upon whom I have repeated the operation nine times, is alive and well, and though not in robust health leads as comfortable a life as most people do at seventy-one years of age who are dependent upon the catheter. No. 3, operated on in 1890, followed by two recurrences at about three months' interval each, has had no recurrence since 1891, and is now again leading an active professional life. No. 4 had the operation repeated six times, but has had no recurrence since 1893. He is now eighty-seven years of age and is in good health. No. 44 has had nine recurrences. He is in excellent health, though he has recently had another operation after a previous two years' interval. I have since divided both his vasa and I think it likely that he will be no further troubled either with stone or prostatic symptoms. These cases were all unfitted for any other procedure. In none of them have the patients hitherto shown any signs of kidney complication.

As in records by other surgeons which have been recently published, the mortality connected with all these proceedings has been reduced to so small a percentage as to assimilate them in this respect to those which we are accustomed to speak of as minor or non-fatal operations. The period of convalescence has also been considerably lessened. In both of these important respects there has been generally a remarkable diminution during the last twenty-five years of the present century.

The stones noted in the table both as to composition and weight include all the commoner varieties of calculi and one cystin (No. 96). The collected and dry fragments of the 101 primary litholapaxies were found to weigh 13,413 gr., or an average weight of over 2 dr. removed from each patient. The largest calculus in this litholapaxy series was a urate (No. 64) which weighed 1200 gr. In the 73 operations undertaken for recurring calculi the fragments removed varied from about 20 gr. in weight to over 2 oz. These calculi were for the most part phosphatic. The youngest patient operated upon (No. 73) was a boy four years of age. A urate calculus weighing about 15 gr. which had caused several acute attacks of retention of urine, was pushed back into the bladder and then crushed and evacuated. He was well and about on the following day. In the same way a cystin calculus was removed from a boy five years of age (No. 96).

A urethral stricture complicated several of the cases of litholapaxy (Nos. 12, 23, 26, 54, 55, 70, 84, and 88). Urethral stricture, as several of these cases show, offers no obstacle in the way of litholapaxy provided the kidneys are fairly sound and have not commenced to suppurate. When the latter has taken place litholapaxy can only be undertaken with a considerable degree of risk. This complication proved fatal in cases No. 70 and No. 88. Where stricture is of that degree of tightness or of previous duration as to render suppurative nephritis imminent or actual, perineal lithotrity, with division of the stricture and subsequent drainage, is far safer. Case No. 104 of the series is another illustration of this. This patient had been treated for stricture for over a year before I sounded him and found a large stone in addition. Litholapaxy would probably have been fatal in not providing drainage for the suppurating bladder, ureters, and kidneys. Perineal lithotrity was selected and since the operation, over four years ago, he has enjoyed excellent health, and has had no recurrence either of stone or of stricture. In 2 of the cases (No. 33 and No. 100) the stone was embedded within the area of the prostatic urethra. In one instance it was seen with the cystoscope. With a sound aided by my finger in the rectum in both cases the stone was freed, pushed back into the bladder, and crushed.

In looking over the table of cases which accompanies this paper it will not be difficult to recognise that prostatic hypertrophy and the conditions associated with it most frequently co-exist with stone recurrence. I shall therefore pass on to the second part of my paper and proceed to offer some observations relative to the prevention and treatment of vesical stone when met with under these circumstances.

II.—Observations Relative to the Prevention and Treatment of Stone Recurring after Operation.

It is only in connexion with the surgical treatment of stone in the bladder when complicated with prostatic enlargement and the vesical conditions associated with this that it becomes necessary to offer any special remarks in reference to stone recurrences after operation. Litholapaxy or crushing when practised on the child or the young adult under normal structural conditions is so rarely followed by the re-formation of stone as hardly to require notice. It happened only once in this series under the latter circumstances (No. 17) and this was probably due not directly to bladder causes, but to a fresh descent from the kidney, as also occurred in a second instance (No. 33). The remaining recurrences and a large proportion of the entire number of litholapaxies were associated with this particular form of urinary obstruction. There is nothing very remarkable in this when we remember that, excluding three or four young persons about or below puberty, the average age of the patients was over sixty-two years. Nor is it difficult to understand why this should be. The enlarged prostate not only often renders the act of complete micturition mechanically difficult and impossible, but it furnishes favourable local conditions for the growth of stones which, having descended from the kidney, are thus detained there. Under such circumstances the male bladder may not inaptly be regarded as a bedding-out ground for renal calculi. Many instances in this series served to illustrate this and to show how gravel and calculi which were formerly expelled naturally ceased to be so as soon as the prostatic age had been reached. And what applies to kidney calculi and concreted crystals is equally true of other foreign bodies which a chronically-inflamed bladder is apt to contain. That an incomplete removal of the débris after a crushing operation may be responsible for some recurrences there can be no doubt, but not, I believe, to the same extent as some are disposed to consider. A red urate or a black oxalate stone is sometimes supplanted by a pure white phosphate. More than one recurring calculus which I have removed had a fixed origin on the rough cicatrix of a previous suprapubic cystotomy; two were formed on centres furnished by the remains of silk sutures employed in the latter operations, and others undoubtedly have had their origin on nuclei provided by shreds and sloughs from an inflamed bladder. Further, the sacs and pouches of bladders distorted in this way by prostatic obstruction furnish hiding places for débris which are almost inaccessible. In view of such obstacles and to prevent recurrence taking place much importance must be attached to the thorough clearance of the bladder in the first instance, to the subsequent management of the case after it has left the hands of the operator, and to such measures as have for their object bringing about shrinking or atrophy of the enlarged gland.

The lithotrites employed should be capable of rapidly and completely breaking up the stone without pounding it too much into such masses as a pestle and mortar produces. The jaws of the lithotrite whilst protected should be able to

TABULAR STATEMENT OF CASES OF PRIMARY STONE IN THE BLADDER TREATED BY LITHOLAPAXY (1890–97).

No.	Age.	Days under treatment.	Stone.		Result.	Condition of			Recurrence or not.
			Composition.	Weight.		Bladder.	Prostate.	Urine.	
				Gr.					
1	63	19	Uric, Phosphatic.	15	Good.	Pouched.	Large.	Alkaline.	Recurrence.
2	61	28	Phosphatic.	150	,,	,,	,,	Ammoniacal.	—
3	59	10	,,	120	,,	,,	,,	,,	Recurrence.
4	79	19	,,	53	,,	Cystitis.	,,	,,	,,
5	64	18	Uric.	80	,,	Normal.	Normal.	Normal.	—
6	65	20	Uric, Phosphatic.	86	,,	Cystitis.	Large.	Ammoniacal.	Recurrence.
7	74	10	Phosphatic.	130	,,	Pouched.	,,	Alkaline.	,,
8	68	7	Uric, phosphatic.	65	,,	,,	,,	,,	—
9	57	5	Uric.	16	,,	Normal.	,,	Normal.	—
10	64	8	Phosphatic.	64	,,	,,	,,	Ammoniacal.	—
11	55	6	Uric.	55	,,	,,	Normal.	Normal.	—
12	56	10	,,	12	,,	,,	,,	,,	—
13	60	28	Phosphatic.	30	Death.	Pouched.	Large.	Ammoniacal.	—
14	60	15	,,	600	Good.	,,	,,	,,	Recurrence.
15	71	18	Uric, phosphatic.	200	,,	,,	,,	,,	—
16	61	6	Phosphatic.	180	,,	,,	,,	Purulent.	Recurrence.
17	20	8	Uric.	60	,,	Normal.	Normal.	Sanguineous.	
18	66	7	,,	150	,,	Pouched.	Large.	Normal.	—
19	53	6	Uric, oxalate.	120	,,	Normal.	Normal.	,,	—
20	56	8	Uric.	86	,,	,,	,,	,,	—
21	75	12	,,	120	,,	,,	Large.	,,	—
22	68	18	Phosphatic.	84	,,	,,	,,	Purulent.	—
23	31	30	,,	74	,,	,,	Normal.	Alkaline.	—
24	64	11	Uric, phosphatic.	189	,,	,,	Large.	Purulent.	—
25	69	7	Phosphatic.	24	,,	Pouched.	,,	Ammoniacal.	—
26	43	7	,,	26	,,	,,	Normal.	,,	—
27	41	16	Uric, phosphatic.	34	,,	Normal.	,,	,,	—
28	45	9	Oxalate.	8	,,	,,	,,	,,	—
29	64	9	Uric.	65	,,	,,	Large.	Albuminous.	Recurrence.
30	67	5	Phosphatic.	25	,,	Pouched.	,,	Ammoniacal.	—
31	70	6	,,	30	,,	,,	,,	Sanguineous.	—
32	72	6	Uric, phosphatic.	100	Death.	,,	,,	Ammoniacal.	—
33	46	8	Oxalate.	30	Good.	,,	,,	Purulent.	Recurrence.
34	66	14	Phosphatic.	240	,,	,,	,,	Normal.	—
35	69	16	Uric.	228	,,	Normal.	,,	Purulent.	—
36	39	8	Oxalate, phosphatic.	31	,,	,,	Normal.	Normal.	—
37	76	14	Phosphatic.	65	,,	Pouched.	Large.	Ammoniacal.	Recurrence.
38	58	8	Uric, phosphatic.	120	,,	,,	Normal.	Normal.	—
39	54	9	Uric.	69	,,	Normal	,,	,,	—
40	61	7	,,	68	,,	Pouched.	Large.	,,	—
41	65	15	,,	180	,,	Normal.	,,	,,	Recurrence.
42	65	7	,,	190	,,	Pouched.	,,	,,	—
43	67	7	Phosphatic.	20	,,	Normal.	Normal.	Ammoniacal.	—
44	72	3	,,	89	,,	Pouched.	Large.	,,	Recurrence.
45	64	12	Uric.	182	,,	Normal.	Normal.	Albuminous.	—
46	69	9	,,	130	,,	,,	Large.	Normal.	—
47	74	15	Phosphatic.	20	,,	Cystitis.	,,	Ammoniacal.	Recurrence.
48	73	14	Uric.	80	,,	Pouched.	,,	Alkaline.	—
49	64	10	,,	40	,,	Normal.	,,	Normal.	—
50	68	18	,,	182	,,	,,	,,	,,	—
51	65	7	,,	80	,,	Pouched.	,,	Ammoniacal.	—
52	64	6	Oxalate.	13	,,	Normal.	,,	Normal.	—
53	62	10	Uric.	120	,,	,,	Normal.	,,	Recurrence.
54	62	13	Phosphatic.	95	,,	Cystitis.	Large.	Ammoniacal.	—
55	47	6	,,	80	,,	,,	Normal.	,,	—
56	73	4	Uric, phosphatic.	80	,,	Pouched.	Large.	,,	Recurrence.
57	69	7	Uric.	125	,,	,,	,,	Purulent.	—
58	62	22	,,	91	,,	Normal.	Normal.	Albuminous.	—
59	66	14	Uric, phosphatic.	143	,,	Pouched.	Large.	Purulent.	—
60	74	6	Phosphatic.	335	,,	,,	,,	,,	Recurrence.
61	60	13	Uric, phosphatic.	76	,,	Normal.	,,	Normal.	—
62	64	3	Uric.	12	,,	,,	,,	,,	—
63	65	10	Phosphatic.	240	,,	Cystitis.	,,	Ammoniacal.	—
64	75	12	Uric.	1200	,,	Normal.	,,	Purulent.	—
65	62	17	,,	91	,,	,,	,,	Albuminous.	Recurrence.

TABULAR STATEMENT OF CASES OF PRIMARY STONE IN THE BLADDER TREATED BY LITHOLAPAXY (1890–97)—(*Continued*).

No.	Age.	Days under treatment.	Stone. Composition.	Stone. Weight.	Result.	Condition of Bladder.	Condition of Prostate.	Condition of Urine.	Recurrence or not.
				Gr.					
66	73	23	Uric.	100	Good.	Pouched.	Large.	Albuminous.	—
67	71	14	Uric, Phosphatic.	600	,,	Normal.	,,	Alkaline.	Recurrence.
68	25	10	,,	18	,,	,,	Normal.	Normal.	—
69	56	14	Oxalate.	240	,,	,,	,,	Purulent.	—
70	54	18	Phosphatic.	120	,,	Pouched.	,,	,,	Recurrence.
71	59	10	,,	336	,,	,,	Large.	,,	,,
72	74	2	Uric, oxalate.	120	,,	,,	,,	,,	—
73	4	1	,,	15	,,	Normal.	Normal.	Highly acid.	—
74	67	16	Uric.	240	,,	Contracted.	,,	Normal.	—
75	70	6	,,	90	,,	Pouched.	,,	Purulent.	—
76	61	8	Uric, phosphatic.	15	,,	Normal.	,,	Normal.	Recurrence.
77	35	9	Phosphatic.	33	,,	,,	,,	Purulent.	—
78	52	17	Oxalate.	416	,,	,,	,,	Oxaluria.	—
79	38	20	Phosphatic.	57	,,	Phosphatic.	*Nil.*	Alkaline.	—
80	54	17	,,	65	,,	Cystitis.	Large.	Ammoniacal.	Recurrence.
81	45	10	Oxalate.	279	,,	Contracted.	Normal.	Normal.	—
82	64	10	Oxalate, phosphatic.	150	,,	Cystitis.	Large.	Alkaline.	—
83	30	7	Uric.	76	,,	Normal.	Normal.	Normal.	—
84	56	7	Phosphatic.	320	,,	Cystitis.	,,	Alkaline.	—
85	67	9	Uric, phosphatic.	120	,,	Pouched.	Large.	Purulent.	—
86	60	4	Phosphatic.	30	,,	,,	Normal.	,,	—
87	72	6	Uric.	120	,,	,,	Large.	Normal.	—
88	62	10	Uric, phosphatic.	244	Death.	,,	,,	Ammoniacal.	—
89	84	10	Phosphatic.	23	Good.	,,	,,	,,	—
90	56	5	Uric.	180	,,	Normal.	Normal.	Normal.	—
91	74	6	Uric, phosphatic.	11	,,	Pouched.	Large.	Ammoniacal.	—
92	76	29	,,	975	Death.	,,	,,	,,	—
93	69	13	Uric.	385	Good.	Normal.	,,	Albuminous.	—
94	65	11	Phosphatic.	20	,,	Pouched.	,,	Purulent.	—
95	69	15	,,	21	,,	Normal.	,,	Normal.	—
96	5	18	Cystin.	150	,,	,,	Normal.	Purulent.	—
97	60	8	Uric.	191	,,	Pouched.	Large.	,,	—
98	66	9	Phosphatic.	26	,,	,,	,,	Ammoniacal.	—
99	75	17	,,	34	,,	,,	,,	,,	—
100	34	9	Uric.	10	,,	Normal.	,,	Normal.	—
101	31	8	Oxalate.	15	,,	,,	,,	,,	—
			Cases treated by Perineal Lithotrity (1890–97).						
102	49	19	Uric, phosphatic.	430	Good.	Contracted.	Normal.	Ammoniacal.	
103	52	31	,,	1446	,,	Cystitis.	Spastic.	,,	
104	56	56	,,	480	,,	,,	Normal.	,,	—
			Cases treated by Suprapubic Lithotomy (1890–97).						
105	56	55	Uric.	308	Good.	Normal.	Normal.	Puro-sanguineous.	—
106	35	32	,,	900	,,	,,	,,	Sanguineous.	—
			Cases treated by Median Lithotomy and Drainage (1890–97).						
107	44	20	Phosphatic.	24	Good.	Cystitis.	Normal.	Ammoniacal.	—
108	41	61	,,	85	,,	Pouched.	,,	Purulent.	—
109	25	23	,,	23	,,	Normal.	,,	,,	—
110	55	30	,,	18	,,	Pouched.	,,	Ammoniacal.	—

REMARKS.

Case 6: Operation repeated 13 months afterwards; death. Case 9: Prostate subsided after removal of stone. Case 12: Urethral stricture dilated. Case 13: Advanced kidney disease. Case 14: Pouch seen with cystoscope. Case 16: Diabetic. Case 17: Suprapubic cystotomy a year subsequently; recovery. Case 18: Double vasectomy subsequently for enlarged prostate; good result. Case 23: Urethral stricture treated by dilatation. Case 26: Urethral stricture. Case 32: A suppurating saccule and pelvic cellulitis caused death. Case 33: Stone sacculated in prostate pushed back and crushed; shrinkage of prostate; recurrence due to fresh descent from kidney. Case 48: Paralysed. Case 54: Tight stricture: (1) internal urethrotomy and (2) litholapaxy. Case 55: Internal urethrotomy for stricture 13 months previously; nucleus of stone a bougie of ol. theobrom. Case 56: Single vasectomy for enlarged prostate on recurrence. Case 60: Double vasectomy for enlarged prostate. Case 66: Very small and contracted bladder with a pouch; double vasectomy. Case 69: Pelvis much distorted by old spinal caries. Case 70: Chronic stricture of urethra; litholapaxy repeated 15 months after; death; suppurative nephritis. Case 71: Double vasectomy for large prostate. Case 73: Impacted stone causing retention; pushed back and crushed. Case 74: Suffered much from chronic bronchitic asthma. Case 78: Complicated with large hydrocele. Case 79: Mucous membrane encrusted with phosphates. Case 81: Incontinence of urine for 3 years previously and constantly wearing a urinal; power of bladder completely restored after operation. Case 84: Chronic urethral stricture. Case 88: Complicated with old stricture and suppurative nephritis. Case 92: Much relieved by operation; death from senile decay; urine specific gravity 1008. Case 94: Double vasectomy for enlarged prostate. Case 100: Prostatic stone pushed into bladder and crushed; shrinkage of prostate. Case 101: Stone seen with cystoscope in orifice of left ureter. Case 102: Lithotrity attempted, but perineal lithotrity substituted. Case 104: Chronic urethral stricture; pyelitis; division of stricture. Case 106: A villous growth was also suspected, but not discovered. Case 110: A stricture necessitated division and drainage.

Note.—All the cases were those of male patients except No. 79, which occurred in a female.

cut up stones such as the phosphates, which though soft and friable are apt when mixed with the mucus from the bladder to run into tough pultaceous pieces which may readily be left behind and form nuclei for further concretions. Hence the powerful fenestrated lithotrites are, as a rule, to be preferred. For use with large stones the lithotrite last made for me (Fig. 1) by Messrs. Weiss and Son has proved a most

FIG. 1.

The lithotrite.

FIG. 2.

The aspirating catheter and stylet.

admirable pattern. It will be seen that to save the hand a cross-bar has been fitted to it instead of a wheel and a short lever worked by the thumb, in place of the old button, by which the sliding movement is converted into the screw when the stone is seized. It must, however, not be forgotten that the former adaptation greatly increases the power which can be brought to bear upon the instrument. A cautious operator will consequently be chary how he utilises his maximum force. Nor must the aspirators and catheters used for withdrawing the broken fragments from the bladder be less efficient. In this series of cases I have continued to use Mr. Morgan's aspirator. My colleague Mr. Freyer has recently described one which is extremely simple and is readily charged with water. The opening or eye in the evacuating catheter should be large and bevelled (Fig. 2) and a probe stylet should be at hand in case of impaction.

In cases complicated with prostatic enlargement and where the patient is, as is often the case, more or less dependent upon the catheter, the bladder should be attended to for some time after the operation. Sufficient importance is not attached to this point. If these cases were carefully looked after for three or four months after the operation, recurrences would be far less frequent. At least once a week the bladder should be washed out with the metal catheter and aspirator, as used in connexion with the operation, in addition to such irrigation and catheterism as the patient can himself employ when necessary. I have also had some large-eyed flexible catheters made to fit these aspirators. The latter are sometimes useful where there are sacs or pouches. The aggregation and growth of calculous matter in the bladder may thus often be prevented. I recently saw a boy, aged four years, who had many of the symptoms of stone. I sounded him under ether but could not find one. I then washed out his bladder with an aspirator catheter as just described and removed quite a quantity of large urate crystals with complete relief to the patient. It was, as Mr. Braine remarked at the time, "a good stone spoilt." Free crystals remaining in the bladder are not an infrequent cause of various irritations and reflexes in young subjects.

The effect of silver nitrate as a local application in cases of chronic cystitis with prostatic enlargement where there is a tendency to produce phosphatic concretion is well known. I remember a case some years ago which bears importantly upon this practice. It was that of an elderly man who when suffering from residual urine broke a gum-elastic catheter whilst passing it and left several inches of it in his bladder. His general condition was such that no immediate steps could be taken to remove it and it was therefore advised that the bladder should be washed out twice a day with a weak solution of silver nitrate. This was done and ten days afterwards the patient allowed me to extract the broken portion entire with a smooth-bladed lithotrite. What struck me on doing so as remarkable was that neither on the piece of catheter nor within the bladder was there any sign of phosphatic concretion. I presume that the action of the nitrate, as with other salts which may be artificially introduced into the bladder, prevented molecular coalescence taking place, as the urine was alkaline and offensive during the ten days the catheter remained in the bladder.

In the third place, my series of cases furnishes examples (Nos. 18, 56, 60, 66, 71, and 94) where vasectomy was employed with the view of bringing about shrinkage of the prostate. It appeared to do good in all these instances, (1) in rendering access to and from the bladder easier both as to micturition and the use of catheters, and (2) in getting rid of that slimy mucus, not unlike birdlime, which clings so tenaciously to the bottom of vessels in which it is allowed to settle. Vasectomy was resorted to under these circumstances in instances where in addition to the recurrence of the stone serious symptoms of prostatic obstruction existed. The stone having been removed in the usual way by the lithotrite and aspirator, one vas was resected in the way described in my Bradshaw lecture[3] and seven days afterwards the remaining one was treated in the same manner, about an inch of each tube being taken away. The small wound usually heals under a collodion dressing in forty-eight hours.

I have never had occasion to resort to castration in connexion with my stone operations, as I think that a trial should first be made of vasectomy before so serious an operation is proceeded with. I have, however, recorded one instance in my Bradshaw lecture (where I have discussed this subject at some length), in which I know excellent results followed castration in a case of recurring stone with urgent and increasing symptoms of prostatic obstruction. In the instances of vasectomy just referred to no recurrence of stone has yet occurred to my knowledge and there has been a general improvement in the symptoms connected with the enlarged gland which co-existed. I think a further experience and a still more extended period of observation will warrant me in concluding that the diminishing number of recurrences in this series was due not entirely to any additional pains taken in the first instance in the removal of the stone, but partly also to the use for some time after of the evacuating catheter and wash-bottle and to the employment of vasectomy on recurrence, in suitable cases, where there was much prostatic enlargement, which practices I have more recently adopted. I will now proceed to the third and concluding portion of my subject.

III.—SOME OPERATIONS WHICH MAY BE REGARDED AS ALTERNATIVES OF LITHOLAPAXY.

In the last nine cases of stone in the bladder arranged in this series (No. 102 to No. 110) it was thought necessary to employ some form of incision to facilitate the removal of the

[3] THE LANCET, Dec. 12th, 1896.

calculus, either entire or by first breaking it. The selection of one or other of these proceedings had reference mainly to conditions or complications outside the mere presence of a stone, as in no instance was the latter itself deemed to be beyond the reach of litholapaxy. In every instance recovery was complete and, so far as I know, permanent. The average age of these nine individuals was about forty-six years, whilst in the previous series of litholapaxies the average was about sixty-two years. In 3 of these cases perineal lithotrity on the lines I have elsewhere described was selected; in 2 suprapubic lithotomy or the high operation was practised; whilst in the remaining 4 the boutonnière or median operation was employed as providing for the extraction of the stone and the subsequent drainage of the bladder, the latter being the main consideration. A few words will be devoted to noting the special advantages connected with the several proceedings and their application to some of the cases selected.

Perineal lithotrity.—The chief reason for selecting this mode of dealing with the stone in the three patients (No. 102 to No. 104) may be very briefly stated. It was essentially a mechanical one, having reference in the first instance to an extremely contracted and thickened bladder, where after trial it was found impossible to use the lithotrite with safety in such a limited area; in the second instance to an unusually rigid or fibrous prostate which rendered the introduction of the short curved lithotrite exceptionally difficult; and in the third instance to a very strictured urethra. The patient in the third case had previously undergone an internal urethrotomy and two divulsions by Holt's method by other surgeons and the canal was structurally unfitted for the instruments used in crushing operations. Further, as will be readily understood, suppurative nephritis was impending if not already in existence. The patient made a good recovery. In these three cases, in addition to the special features I have mentioned the stones were large and hard, weighing respectively 430 gr., 1446 gr., and 480 gr. In one of the patients (No. 103) who was submitted to perineal lithotomy in 1893, nine months afterwards he had an attack of cystitis which threatened to become chronic. As this would probably have led to a recurrence I opened and drained the bladder from the perineum for ten days. This speedily cured the cystitis. I hear that the patient continues to have excellent health and has had no return of the stone. In a previous series of cases in two instances I drained the bladder by a median perineal puncture and drainage-tube where some weeks after lithotrity the urine remained purulent and chronic cystitis continued. In both of these the independent drainage, apart from and subsequently to the removal of the stone, acted beneficially and certainly appeared to complete the cure. In neither of these patients did recurrence take place, though before the drainage was employed it looked as if this was most likely to happen.

The chief points in favour of the selection of perineal lithotrity appear to be these: (1) it enables the operator to crush and evacuate large stones in a short space of time; (2) it is attended with a very small risk to life as compared with other operations, such as lateral or suprapubic lithotomy, and is well adapted to old and feeble subjects when for any reason crushing is inadmissible; (3) it permits the operator to wash out the bladder and any pouches connected with it more effectually than by the urethra, as the route is shorter and the evacuating catheters employed are of much larger calibre; (4) the surgeon can usually ascertain, either by exploration with the finger or by the introduction of forceps into the bladder, that the viscus is cleared of all débris; (5) it enables the surgeon to deal with certain forms of prostatic outgrowth and obstruction complicated with atony of the bladder in such a way as to secure not only the removal of stone, but the restoration of the function of micturition; and (6) by the subsequent introduction and temporary retention of a soft rubber drainage-tube states of cystitis due to the retention of urine in pouches and depressions in the bladder wall are either entirely cured or are permanently improved. To lock up unhealthy ammoniacal urine after a lithotrity in a bladder which cannot properly empty itself is to court the formation or recurrence of a phosphatic stone. Hence it is well suited to some cases of recurrent calculus. I have never known the wound to remain unhealed except in those instances where for some reason or other it has been desired to construct a low-level urethra.

Supra-pubic lithotomy.—This was successfully practised in two instances (No. 105 and No. 106). In both, from the pain and the frequency and duration of the hæmorrhage, growth was also suspected but not discovered. The bleeding was so free and was so readily excited that the cystoscope afforded no assistance, and I thought it better to remove the stones in such a way as to enable me to directly explore the interior of the bladder. No cause for the bleeding other than the calculus was discovered. It is seldom that the latter occasions so much hæmorrhage. The stones weighed respectively 308 gr. and 900 gr.

I am not much in favour of this method in removing large calculi from elderly males. In younger persons it is much safer and there is less objection to it. The mortality is considerable, as shown by Guyon, in males over fifty years of age. The cicatrix which is left in the bladder sometimes greatly interferes with complete micturition and in 2 instances a rough scar was shown on exploration as forming a holding-ground for phosphatic concretion. In one of these instances the scar has been excised with advantage.

Median perineal lithotomy with bladder drainage.—In 4 instances (No. 107 to No. 110) this simple operation was practised for the removal of small stones which were incidental to chronically inflamed and suppurating bladders. The bladder was subsequently drained for varying periods on the same principle as is sometimes utilised in the case of chronic abscesses, a satisfactory result being obtained in each instance.

Nitrous oxide gas and ether were the anæsthetics usually employed throughout the whole series of operations and nothing occurred to make me alter the favourable opinion I have expressed as to this method of producing insensibility. In elderly and debilitated persons with weak hearts the stimulating effect of the ether in improving the circulation was often most marked; nor were any casualties noted in connexion either with the instruments used or the parts operated upon. No serious hæmorrhage was encountered where incisions were necessary and after the litholapaxies it was rare to find the urine tinged with blood forty-eight hours after the operation. Any cystitis which was present at the time of operation usually rapidly subsided after the removal of the stone and no trouble with elevations in temperature, rigors, or fever complicated recovery.

As to sounding for stone I would repeat what I have often said. I much prefer that the stone should be removed where this is practicable on the occasion when it is first detected by the sound and the diagnosis is made. This practice predominated in this series, as the more I see of stone in the bladder the more I recognise the utility of this precaution, particularly in the case of elderly males. Where the prostate is large stones grow up like mushrooms in the pouch-like space between the large prostate and the back of the bladder and make, as it were, nests for themselves. Where there are two or three they often become fitted to each other like tessellated tiles, and if this arrangement is accidentally and suddenly disturbed most acute cystitis is apt to follow. Most of us know how much discomfort a displaced piece of tartar will cause in the mouth until it is completely removed. Even when they are delicately and lightly touched with the sound the stones may get out of gear with their bed, and if urine finds its way underneath them to some unaccustomed spot an acute cystitis may be aroused in the interval between the detection of the stone with the sound and its removal by the lithotrite. In one patient (No. 41) this actually happened and made a simple operation a serious one, as I had to crush and remove the stone seven days after sounding in the presence of a most acute inflammation which otherwise, I am sure, would have proved fatal. He had, as I anticipated, a recurrence and I removed a small phosphatic stone eight months afterwards (in March, 1894). He has since enjoyed excellent health and has had no recurrence. The process of sounding, however skilfully performed, is certainly not an agreeable one and is best accomplished under an anæsthetic. Fewer stones would escape detection and consequently be sooner removed if this was a more general practice. The cystoscope has in several instances been of much service in clearing up doubtful points—for example, in determining the presence and position of pouches or sacs and whether urine derived certain changes observable in it from either, and from which, kidney or from sources below these organs. In one case of encysted calculus (No. 100) not only was the stone seen but its removal was facilitated by exact knowledge as to its location. In another case (No. 101) the cystoscope clearly showed the impaction of a stone in the orifice of one of the ureters.

In conclusion, this series of cases may serve to illustrate—

(1) conditions under which the surgical treatment of stone in the bladder, in the adult male particularly, have to be undertaken, at all events in this country; and (2) various operations which may be selected for its cure or relief. Of course, the relative proportions of the latter to each other will vary in some degree, and it is only reasonable that this should be expected. I well remember some years ago, when "lithotomy *versus* lithotrity" was a burning question, being present as a junior at a consultation where after the diagnosis of stone in the bladder had been made the operating surgeon in charge asked the opinion of his senior colleague, a man possessed of much common-sense and surgical experience, as to whether crushing the stone or cutting should be practised. "Whichever you can do best," was the prompt but somewhat curt reply. Lithotomy was selected and the patient made an excellent recovery. I doubt if at that time crushing had been resorted to whether the case would have terminated equally well. Where the pathological conditions were so equally balanced I do not think a better answer could have been given.

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GENERAL PARALYSIS OF THE INSANE: AN ATTEMPT TO ASCERTAIN ITS AVERAGE DURATION AT THE PRESENT DAY.

BY JAMES ADAM,

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PERHAPS there are no cases which come under treatment in the various institutions for the insane throughout the country which excite more interest or attract greater attention than those of the prevalent disease known as general paralysis. I use the word prevalent because it is found so in and near large centres of population, although in districts more sparsely populated it may be more rarely met with. Often obscure in its earlier manifestations, there usually no longer exists any doubt as to the actual character of the malady as it presents itself in these institutions, for by the time the case reaches them it has developed at least some of its typical and unmistakeable features. So much has been already written by competent writers on the subject of general paralysis that there is little or nothing left to add regarding its general characteristics and it would not accord with the object held in view by the writer of this article were he to attempt to do so. It may therefore suffice for the present purpose to allude to four stages through which the disease commonly passes and to remark in passing that the duration of those various stages differs much in different cases; that the disease occurs more frequently in males than in females; and that when it does occur in the female sex the symptoms, especially the mental symptoms, differ from those in the male sex.

The first stage which calls for notice is the period of onset during which the patient, with his malady more or less unrecognised, is usually resident in his own home, goes about, or attempts to go about, his daily avocations and still remains a free agent, brooking no control, squandering his money recklessly, and being immoral to his heart's content. The importance of a correct diagnosis being made at this stage is evident, so that proper steps may be taken for care and treatment with as little delay as possible. But these steps are too often, almost of necessity, delayed until much and irretrievable mischief is done.

Then follows the second stage, during which, the disease having fully developed itself, removal to an asylum becomes imperative, and it is usually in this stage that the patient is first seen in such an institution and for the first time becomes subject to carefully and accurately recorded statistics. There is, I think, little doubt that much may be done by treatment during this second stage to favour arrest or possible cure. The value of such arrest or cure if brought about goes without saying, for not a few of those affected by general paralysis are persons of property, and a successful and just disposition of property may be accomplished at such a period.

In favourable cases a third stage sooner or later sets in—a stage of arrest of the disease, during which the patient becomes quiescent and docile and gains flesh. He also regains much of his lost mental power and coherence and self-control return. In some cases he even wholly recovers, there being well-authenticated instances, as recorded below, not only of recovery from well-marked general paralysis but of successful resumption of business, and this even in the busy heart of the metropolis itself.

The fourth stage needs little comment. Utter helplessness is usually ushered in by epileptoid or apoplectiform seizures, and as a rule such seizures are continued or are frequently repeated until exhaustion or coma mercifully closes the scene.

Having thus described the stages through which this strange malady usually passes I will now endeavour to ascertain as nearly as possible the average length of time occupied in passing through them. It will, I think, be found practically that duration is governed by that stage which I have described as the third or arrest stage, for without this the average duration would be infinitely shorter than it even now is. General paralysis of the insane would, in fact, nearly always be a rapidly fatal disease if it ran its course without interruption. A question is not infrequently addressed to the medical practitioner by the guardians or relatives of general paralytics as to the probable duration of the disease after its existence has been ascertained. The question is usually answered by the aid of the general belief that on an average general paralysis of the insane runs its course and terminates in death within two years. My experience for several years has led me to doubt the accuracy of this assumed average, for I have seen so many cases of prolonged arrest, and more than one of recovery, as to suggest the possibility of a general modification of the disease having taken place, rendering it more amenable to treatment. On the other hand, this prolongation may be accounted for by the fact that the experience of later years has been among the more educated classes, and education generally exercises a modifying influence in all the varieties of mental disorder. Be that as it may, I resolved to make the attempt to verify or to rectify if necessary the old-standing estimate of duration and as a first step addressed questions on the subject to the superintendents of all institutions for the care of the insane in England. I was favoured by numerous replies, for which I beg here to express my thanks, and although they are not quite complete the figures so obtained are valuable and enable an approximate estimate at least to be given, which appears to be not far removed from what would prove to be the complete facts of the case. In framing these figures difficulties, of course, presented themselves, not the least of which were the vagueness attending the inception of the disease and the incorrectness or unreliability of the data received with the patients at the various institutions at the time of admission. Moreover, the early symptoms of general paralysis are not always easily recognisable. There are also the wandering cases, which may or may not be recognised or taken notice of at all until a late stage of the disease. The returns obtained were from 26 county asylums, 16 private asylums, 6 lunatic hospitals, 2 military and naval hospitals, and 4 borough asylums. The returns extended over the past ten years, which accounts for the smallness of the return from the borough asylums, some of which have only recently been called into existence. The following figures give the results arrived at:—

Table showing approximately the Average Duration of General Paralysis (in Male Patients only) in Institutions for the Insane in England, with the Age at Death.

Institutions.	Average duration of disease.		Average age at death.	
	Years.	Months.	Years.	Months.
County asylums	1	10	42	6
Private asylums	2	6	46	0
Lunatic hospitals	1	7	44	0
Military and naval hospitals ...	1	11	37	5
City and borough asylums	1	8	46	6

Thus the correctness of the stated old-standing average is practically verified by the present figures, taken as a whole, although it would appear that the educated and well-to-do

classes have a longer period of existence meted out to them after the onset of the disease than have the poorer classes. The explanation of this may be the earlier recognition of the disease in the wealthier classes and the earlier resort to care and treatment.

Annexed are notes illustrative of three typical cases, with recovery in two.

CASE 1. *Undoubted general paralysis with typical and marked mental as well as physical symptoms of the disease.*—The following characteristic letter was written two or three months after onset whilst under care: "I am going to astonish the whole world this week; the papers will be full of it. I am going to reform the world—England to be made a paradise. Work for all the unemployed; no more taxes, workhouses or prisons required. All diseases will be banished; there will be simply a few paying hospitals. No one to be married before they are twenty-four years of age, women twenty-one years. The first thing to do is to get together all the vagabonds, thieves, drunkards, and wife-beaters, and I shall have them punished with a cat-and-nine-tails. The sea to be brought all over England, also electric light, good roads to be made, plants, trees, and wild flowers on the banks. Electric tramcars. I shall have plenty of money to do what I like with. Your dad will 'be a bishop' and my private chaplain. I have learnt to sing and play anything on the piano; you will hardly know me, I am so improved. Nice church and cathedral will be built. I am going all over the world and you shall come to some of the best places with me. Address to me, Grand Hotel, Charing Cross." At the end of six months, arrest having been in progress for some time, a consultation among leading psychologists and neurologists was held in London, with the result that no trace of the mental disease was discovered. A three months' probation followed, at the end of which time the patient was discharged recovered.

CASE 2.—In this case equally typical symptoms presented themselves, but an enumeration of them would prove too lengthy. The patient believed he was making £190,000 per diem, &c.; six months later an inquisition in lunacy was held by a master in lunacy on the request of the family, but by the time it was held there was no evidence to produce of existing insanity. Three months later ordinary work was resumed in London and at the end of another three months the patient, remaining perfectly well mentally, was also discharged recovered.

CASE 3.—This case was of about six years' duration and during a considerable portion of the time the disease was in a state of arrest.

West Malling, Kent.

AXIS-TRACTION FORCEPS.

BY WALTER COLQUHOUN, M.A., M.B., C.M. GLASG.

THE matter of this paper, the subject of which has caused me considerable thought, may not appear inopportunely at the present moment, when so many busy practitioners are giving up their old forceps for forceps guaranteed to pull in the direction of the pelvic axis. If I may seem to some readers to deal with points which have been thrashed out elsewhere at greater length my answer is that they did not seem to be known to able practitioners, my friends, and, further, that they have evidently been missed more or less by inventors whose forceps are in good enough repute. Dr. Playfair pertinently remarks concerning forceps: "It would be a wearisome and unsatisfactory task to dwell on all the modifications of the instrument which have been made, which are so numerous as to make it almost appear as if no one could practise midwifery with the least pretension to eminence unless he has attached his name to a new variety of forceps." Nor can it be expected that those who dwell in the valleys will altogether escape the epidemic ranging among dwellers on obstetric heights. In many a humble medical home in Scotland some secluded cupboard contains weapons which may probably be hung on the walls by female posterity and be pointed to with pride as relics of the battle of Bannockburn. I also invented a beautiful pair of forceps, superior to anything in existence, but convalescence fortunately setting in while the matter was at the paper stage I began to consider the essentials demanded from axis-traction forceps, and also how those demands are met by the various forms in use. It is my purpose in this paper to deal with the general question from that point of view.

A pair of forceps is said to act in three ways: (1) as a tractor; (2) as a lever; and (3) as a compressor. An axis-traction forceps (since it is inconvenient to use two different pairs in the same case) should combine these three properties with that of confining traction at each point to the direction of the pelvic axis. To these properties attempts are now made to provide for free movement of the fœtal head in flexion, extension, and rotation, and in addition it is demanded that the forceps should act as a guide to the fœtus and as an indicator of the direction of traction. Let me consider the points in detail.

Direction of traction.—In many instruments the forceps are used, but used erroneously, as an indicator of the direction in which traction should be made; that is to say, the pelvic curve of the instrument is considered to coincide with the pelvic axis, and traction being made on the instrument after locking by means of a tractor which enables it to swing more or less freely it is supposed to slide out keeping to the pelvic curve. The instruction given with most instruments is that the bar of the tractor should be kept parallel to the handles of the forceps. Now, to pull in the direction of the axis the pull must be given at each instant in the direction of the tangent to the pelvic curve at the point where it passes the centres of the fenestræ. Accordingly, if it is intended to use the handles of the forceps as an indicator of the direction of traction they should be bent backwards. A glance at Tarnier's excellent instrument will show that the part of the forceps corresponding to the handles of our instruments is practically parallel to the curve at the centre of the fenestra. In Neville's forceps also, Rotunda pattern, an arrow indicates the direction of pull which is inclined backwards from the handles. In connexion with this point the following quotation from Barnes's "Obstetric Operations" is interesting: "Dr. Aveling curves the handles of a short double-curved forceps backwards, thus increasing, he affirms, the tractile power." Here the idea does not seem to have been to change the direction of the pull, but rather to approach the point to which traction was applied to the line representing the axis, just as is done in axis-traction instruments by curving the traction rods backwards. The direction of traction altogether depends on the direction in which the pull is made and not at all on the point at which it is made. Thus it is of little use to curve the traction rods backwards if the pull is in the wrong direction. They are curved backwards because the forceps and the child's head forming a rigid lever, the fulcrum of which is above the point of application of the forceps, if any force be applied in a given direction to the handle of the forceps the point of application of that force tends to lie on a line drawn through the fulcrum in the given direction. Hence the application of a force at the handles of the forceps, even when applied in the right direction, may wrongly cause or prevent flexion or extension, or, what is of more serious consequence, may press the forceps and head injuriously against the soft parts of the mother. The curving of the traction rods backwards tends to place the point of application of the pull on the line of direction of the force which passes through the fulcrum. If this condition be satisfied and the pull be at each instant in the right direction it is of little importance whether the traction rods be attached high up or not.

Rotation, flexion, and extension.—Why, then, is it asserted to be a distinct advantage in practice to have the traction rods attached high up? I have heard it asserted that such an arrangement allows of free flexion or extension, but I hope to show presently that there is little truth in the assertion. If there is any advantage in the high insertion of the traction rods it seems to me to lie in the fact that such an arrangement allows the forceps to act as guide to the fœtal head more easily and tends to minimise the disadvantage accruing from wrong application of force at the end of the long rigid lever formed by head and forceps. Flexion and extension occur at the proper stages during delivery by rigid forceps and as a matter of necessity. It is claimed that some of the recent axis-traction forceps by allowing the forceps to swing about the points of application of the traction rods allow free flexion and extension and yet the inventors of the instruments use them as indicators of the direction of traction. As a matter of fact, forceps which fit the pelvic curve and are rigidly connected with the fœtus can have no free swing, and flexion and extension, except within

very small limits, occur at the same places during delivery and in the same manner as when rigid forceps are used, traction being applied by the handles. Thus extension, for example, could take place without advance of head and forceps only by the forceps leaving the pelvic curve.

A point which is not much dwelt on by inventors is that forceps which are best suited for axis traction, having a full pelvic curve, are unsuited for rotation and that if they rotate they are no longer axis-traction forceps. Indeed, the only way to restore true axis traction in such cases would be to take them off after rotation and obtain a new grip. Forceps with a pronounced pelvic curve are evidently intended to be put on in the transverse diameter, and if rotated to any extent the pelvic curve is no longer a guide or indicator but rather a hindrance. Hence the wisdom shown by Simpson in making his forceps with a modified pelvic curve to allow of some rotation and slight movement of flexion or extension. It seems to me a problem worthy of grave attention whether for general use the axis-traction forceps coming so much into vogue are not more dangerous than Simpson's long forceps used with some knowledge and caution. Rigby in his "System of Midwifery" says: "The forceps is the simplest imitation of nature, for, in fact, it is nothing more than a pair of artificial hands introduced one on each side of the head." Now when a man grasps the handles of the forceps the instrument may be regarded as a continuation of his own hands. There is direct connexion between his hands and the fœtus, he feels when it moves or yields, estimates more accurately the force he is using, and by his great leverage can, guided by his knowledge, help its progress at a difficult point. Using the axis-traction forceps is like putting another man's hands into the pelvis to grasp the head and then pulling on his coat-tails. I am so convinced o the advantage of a rigid connexion with the fœtus that, apart from other considerations, I consider that to be one of the advantages of Murdoch Cameron's antero-posterior forceps. It is quite common for medical men to complete delivery by pulling on the traction bar. Now I confess that if the head is high in the pelvis, and indeed until it has reached the floor, it is of advantage to have an indicator of the direction of the axis and also the power of pulling freely in the direction of the axis, but I am of opinion that in every case both hands should be used, one grasping the handles of the forceps and the other the traction handle. The hand which grasps the handles of the forceps can apply leverage where necessary, steady the progress of the fœtus, and obtain information of that progress which would not be obtained by merely pulling on the traction handle. When the head has reached the floor of the pelvis it is especially necessary, for the sake of the perineum, among other reasons, to complete delivery without having recourse to the traction handle. In his "System of Midwifery," 1844, Rigby writes: "In extracting the head we must bear in mind the part of the pelvis in which it is impacted and make our efforts in the direction of its axis; we must also recollect the curved form of the instrument, and that we must not pull in the direction in which the handles point, *but rather hold them firmly in one hand and by pressing against the middle of the forceps with the other guide the head downwards and backwards into the cavity of the pelvis.* We shall thus make our extractive effort in the direction of the upper portion of the blades, or that part which has the chief hold upon the head." (The italics are mine.) Here there is perfect axis traction arranged for without any great apparatus but simply by means of the ordinary forceps used with the good sense and ingenuity of a practical man, and his axis traction would be much more perfect than that of a practitioner who delivered by simply pulling on the traction handle of one of the latest instruments. Traction rods enable the operator to use the second hand to great advantage, but the more important hand is the one which grasps the handles of the forceps. The forceps in Rigby's hands had another important use, for he continues: "Whilst extracting we should, as with the straight forceps, slowly move the handles from side to side and even make them describe a circle. We thus not only use the forceps as a simple extracting instrument, but make it act as a lever in every direction and greatly facilitate the advance of the head, even under circumstances of considerable impaction."

It was the considerations I have set forth which caused my forceps to be stillborn. I was providing for free movements of rotation, flexion, or extension, by placing immediately below each fenestra a swivel and a hinge, which could both be unlocked from the handles. I am now convinced that while it is a benefit to be able to use the curved traction rods, the rigidity of the instrument and its simplicity should be interfered with as little as possible.

Glasgow.

PARALYSIS AGITANS;

WITH AN ACCOUNT OF A NEW SYMPTOM.

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EIGHTY years ago Parkinson wrote his classical description of paralysis agitans. So little has been added to its symptomatology since and the disease now appears at first sight to be, clinically at least, so thoroughly worked out that to many it may seem a superfluous task to traverse once more a subject so well worn. The following paper, therefore, must be regarded as merely supplementary to the descriptions in the text-books, not in any sense as a substitute for them.

Within the past two years I have had opportunities of studying a number of patients, 28 in all, suffering from paralysis agitans and it is upon personal observations on these cases that the following remarks are based. Although the number of cases is not large enough to permit of any statistical references being founded upon them alone, yet the fact that they have been examined and compared by one person renders the value of the observations fairly uniform, whilst the cases are sufficiently numerous to justify me in drawing certain clinical conclusions. Of these 28 cases, 17 occurred in men and 11 in women. This greater frequency among male patients is in entire agreement with the combined statistics of a large number of cases seen by other physicians, which show the disease to be much more frequent in the male sex than in the female, the proportion being about 2 men to 1 woman.

The age of onset of symptoms in my series of cases is instructive. It ranges from twenty-two years to seventy-three years, the distribution being as follows:—In 1 case the earliest symptom appeared at the age of twenty-two years; in 1 case at thirty years; in 1 case at thirty-three years; in 2 cases between the ages of thirty-five and forty years; in 3 cases between forty and forty-five years; in 6 cases between forty-five and fifty years; in 7 cases between fifty and fifty-five years; in 4 cases between fifty-five and sixty years; in 2 cases between sixty and sixty-five years; and in 1 case at the age of seventy-three years. Thus 23 cases out of 28—i.e., over 82 per cent.—commenced after the age of forty years.

A family history of nervous disease was obtained in only a few instances (in 6 cases out of 28). In 4 of these 6 cases there was epilepsy or insanity in the patient's brother or sister; in 3 of the 6 cases a relative had actually suffered from paralysis agitans—a maternal aunt in one case, a paternal grandfather in another, and a sister in a third. As to exciting cause, 6 patients gave a history of fright or emotional disturbance. Thus, for example, in one case the earliest symptom—shaking of the left thumb—showed itself after a shock occasioned by a sister becoming insane. Another patient was at a menagerie when a lion escaped from its cage and caused considerable alarm amongst the spectators. On the next day the patient's illness is said to have commenced, his first symptom being stiffness of the left leg. Another patient was threatened as a "blackleg" by his fellow-workmen on the railway who were on strike and ever afterwards he found his right hand stiff and his handwriting unusually slow. Another patient blamed the shock of having a tooth extracted as being the antecedent cause of her illness, the earliest symptom in her case being tremor of the left hand. Worry or overwork was assigned as the exciting cause in 3 cases; 3 were said to have followed an attack of influenza; and one patient had an attack of right hemiplegia a few weeks before the tremor of paralysis agitans appeared in his left hand. One man had his foot trodden on by a horse a year before the onset of tremor in that foot. One woman's symptoms came on after a confinement at the age

of forty-six years and another patient sustained a fall which is said to have produced a prolapse of the uterus and this was succeeded by stiffness of the legs. In the remaining 12 cases no cause was assigned by the patient in the form of injury, emotion, or preceding disease. Moreover, the severity of the disease in those cases where some exciting cause was ascribed was not at all proportional to the intensity of the assigned cause. It therefore seems probable, on the whole, that such so-called exciting causes, if they really are causes at all, merely precipitate the disease in a decaying nervous system.

The earliest symptom in a large proportion of my cases was not tremor but stiffness—contrary to the orthodox statements of the text-books. In 14 cases out of 28 stiffness and weakness preceded the tremor for periods varying from several weeks to over two years, and in 3 of these cases tremors were entirely absent although the disease had been well established, with its characteristic attitude and facial expression and with a definite history of stiffness and weakness, for fifteen months, eighteen months, and four years respectively. In 3 other cases, again, tremors only occurred on excitement or on voluntary effort, the patients exhibiting no tremor whatever when at rest. The dictum that the tremors of paralysis agitans are diminished by voluntary movement can therefore no longer be accepted as an invariable rule, nor as a secure point of diagnosis between paralysis agitans and other diseases.

The symptoms of the disease in most cases are hemiplegic in distribution. In only 2 cases out of 28 were the limbs of both sides equally affected. The left side appears in the majority of cases to be affected before the right, in right-handed people. Thus 14 cases began on the left side and only 12 on the right, and one of these 12 was in a left-handed man, so that his case should be properly added to the 14 left-sided cases. That side which is first attacked remains, as a rule, more severely affected than the other side even when, later in the disease, the symptoms have become bilateral. The upper extremity was affected before the lower in 18 cases out of 28 and the hand usually suffered before the shoulder, though not invariably. Thus one patient, a woman, first felt her left hand weak and stiff when peeling potatoes, so that she had difficulty in turning the potato round. Another patient, a professional musician, first noticed weakness in her left hand when playing the organ. Several patients noticed, as their earliest symptom, an abnormal slowness in writing; another patient first experienced inconvenience from the tremor of his fingers owing to a difficulty in buttoning his clothes. In only one patient did the weakness begin in the shoulder—his attention being attracted by the unusual difficulty which he experienced in putting on his overcoat.

The orthodox clinical picture of a patient suffering from paralysis agitans is too well known to require much emphasising here. In a fully developed "classical" example of the disease the constant rhythmic tremors of fingers and wrists, the "interosseal" position of the fingers, the stooping attitude of the head and trunk, the "festinant" gait with its short, shuffling steps, the retropulsion on walking backwards, the difficulty in rising from the sitting to the standing posture, the tremors of the legs when sitting down, the slowness of voluntary movements in trunk and limbs, the fixed and sad facial expression,—all these, when present, form a striking clinical picture which it is easy to recognise. But such a condition of affairs is only reached when the malady is far advanced and we ought to be able to recognise its nature long before the disease has attained such severity as to be diagnosable telescopically.

Let us therefore consider some of the symptoms of the disease more in detail. The prevalent conception of paralysis agitans is that of a disease in which sensory symptoms are practically almost absent. Such, however, is not the case. Dull, aching pains in the affected limbs, along with a feeling of stiffness and weakness, often precede for a long time the actual rigidity or tremor. The patients also frequently complain of sudden flushes of heat or of cold spreading all over the body, especially at nights when in bed. As mentioned above, a case of paralysis agitans may run its course for years without any visible tremor whatsoever, this being the so-called "paralysis agitans sine agitatione." One reason why this variety or stage of the disease is not more generally known is because the real nature of the malady is usually not recognised until obvious tremors have appeared. As to motor symptoms, the presence of stiffness and rigidity should suggest paralysis agitans almost as readily as does the existence of visible rhythmic tremors. In paralysis agitans all voluntary movements may become slow and stiff, with a few notable exceptions, as in the ocular, palatal, and respiratory muscles. In a well-marked case, if the patient be requested to look suddenly at some object near the extreme lateral boundary of his field of vision, he turns his eyes smartly in the desired direction whilst his head and neck follow slowly and deliberately in the movement of rotation. Why the ocular muscles should usually escape it is difficult to explain, since almost all the other voluntary muscles of the face, trunk, and limbs may be affected, certainly by rigidity and often by tremor as well. Rhythmic tremor of the jaw occurred in 4 of my cases, the movement of the jaw being an up-and-down one and synchronous with the rhythmic movement of the limbs.

The face is characteristically affected, and in a well-marked case in which both sides of the face have become affected the result is the "Parkinsonian mask" in which the expression is fixed and woe-begone; it has been aptly termed the "starched" expression. In this condition the facial immobility is such that when the patient is talking his play of facial expression is almost *nil*, the deficiency being evident both in the upper and in the lower facial muscles. The condition can be most strikingly demonstrated by covering up the patient's chin and lower lip whilst he is talking. It is then often remarkable how motionless is the upper part of the face above and including the upper lip. And this "starched" expression of face may be unilateral, as will readily be understood when we remember the frequent hemiplegic distribution of the disease. Thus out of 11 cases which exhibited the phenomenon in no fewer than 9 the facial movements were distinctly asymmetrical, the weakness being most marked in the lower facial muscles and always on the same side as that on which the limbs were affected, the difference between the two sides of the face being best brought out when the patient was made to retract the upper lip, the naso-labial fold in such cases being distinctly shallower on the weaker side. In some cases (6 in my series) the face is not merely immobile but may actually develop rhythmic tremors, especially about the lips, and in 3 cases this was associated with a synchronous antero-posterior tremor of the tongue. The voice is often high-pitched and monotonous and its quality is frequently thin and quavering. The soft palate was not affected by tremors in any of my cases. Articulation is frequently disturbed, tending to assume a "festinant" character. The patient starts off deliberately enough at the beginning of a sentence, but after a few words the syllables become slurred and jumbled together, so that in some cases the concluding words of each sentence are almost unintelligible.

As regards the trunk and limbs the characteristic stooping attitude and the frequent rhythmic movements are so familiar that they need not be described here in detail. But one remark may be added—viz., that the attitude of the patient, the "interosseal" position of the hand, the semi-flexed, pronated forearm, the frequently unilateral facial weakness, most evident in the lower facial muscles, the stiff, shuffling gait, often more marked on one side than on the other,—all these, as has been pointed out by Dr. Hughlings Jackson, closely resemble the attitude seen in ordinary hemiplegia due to a cerebral lesion.

Another symptom, which is seen only in advanced cases accompanied by much rigidity, consists in a peculiar method of assuming the recumbent attitude. The patient, instead of lying down in bed in the usual way, climbs up on to the bed and stands on it. Then bending down very slowly he takes hold of the rail at the foot of the bed with both his hands and gradually sits down on the bed, holding on to the rail all the time. Having in this manner reached the sitting posture the patient then allows his trunk to fall backwards into the recumbent posture. This circuitous method of getting into bed is characteristic of the disease. A somewhat similar affection is described below (*vide* Case 3). Difficulty in changing the position when in bed is a common symptom and patients frequently complain, in addition, of a difficulty in finding a comfortable position when lying down. This feeling of restlessness is interesting when we remember the muscular rigidity which accompanies it.

In concluding this paper I should like to call attention to a new symptom which has not hitherto, I believe, been placed on record. As might be expected, it is a minor symptom, but in my series of cases it occurred no fewer than five times—i.e., with sufficient frequency to place it beyond

the category of mere coincidence. It consists in a peculiar affection of the toes, which in the majority of the cases in which I have met with it was one of the earliest symptoms of the disease, and is therefore, I think, of considerable diagnostic value. It is as follows. The patient complains, when walking, that the toes of one foot occasionally become spontaneously strongly flexed and curled up under the sole in a cramp-like fashion, causing difficulty in walking. This "curling up" of the toes is often so uncomfortable that the patient has to stand still for a minute or two until he can get his toes to relax and spread out flat again. All the toes, with the exception of the great toe, participate in this flexor contracture; the hallux, on the other hand, usually becomes hyperextended at the same time; sometimes, however, it may become flexed like the other toes. In some cases the contraction may spread to the anterior tibial muscles, causing an inversion of the ankle as well. For permission to publish my notes I am indebted to the courtesy of Dr. Hughlings Jackson, Dr. Buzzard, Dr. Ferrier, and Dr. Ormerod.

CASE 1.—The patient, a man, fifty-four years of age, was admitted to the hospital on Dec. 13th, 1896. Six months before his admission, when walking, he began to feel the toes of both feet become occasionally hyperextended, this movement passing on at once to one of plantar flexion. His ankles also became dorsiflexed, so that he had to take a step or two backwards until the cramp passed off. Two months after the onset of this symptom his hands became stiff and weak and his handwriting became abnormally slow. On admission he had the typical facies of paralysis agitans—the starched expression, the stooping of the head, the elbows slightly flexed, the fingers in the "interosseal" position, no tremor either at rest or on movement, and all voluntary movements slow and stiff.

CASE 2.—A man, forty-two years of age, was admitted to the hospital on Feb. 9th, 1897. For four years before his admission he noticed that the toes of his right foot would occasionally become strongly flexed when he walked so that he had to stand still until his toes relaxed. Later his right leg became stiff and weak and his right hand became slow in its movements so that he could not cut his food readily nor could he write so easily or so rapidly as usual. Within the last three or four months he had developed slight tremor of the right foot when fatigued. On admission he had slight weakness and rigidity of the right face, arm, and leg, with marked "starched" expression. The right hand was held in the "interosseal" attitude and the right elbow was habitually semi-flexed. All movements of the right arm and leg were slower and stiffer than on the left side. He dragged his right foot a little in walking; there were no tremors on admission. He complained of difficulty in turning in bed and in finding a comfortable posture when in bed.

CASE 3.—A married woman, aged fifty years, was admitted to the hospital on June 14th, 1898. For three years she had had trembling of the left hand and arm followed, some six months later, by trembling of the right hand, which she first noticed when putting pegs on a clothes-line. For two years she had had difficulty in turning in bed and had been unable to get into or out of bed without assistance owing to stiffness of her legs. About a year before admission she began to feel her toes curling up under her soles inside her shoes when she was sitting down. This made her get up and walk about for a few minutes until the symptom passed off. She had been unable to sing for a year; within the last month or so her jaw began to tremble and her articulation became less distinct. On admission she was seen to have severe paralysis agitans with the typical "starched" face, the typical attitude of the limbs and trunk, and tremors of the face, jaw, tongue, and limbs, synchronous, the rate of tremor being 6 per second. The tremors affected the limbs equally on the two sides. Her articulation was markedly festinant and her voice was monotonous and plaintive. All voluntary movements of the trunk and limbs were slow and stiff and the tremor persisted in spite of voluntary movement. The gait was slow and shuffling and there was no festination; she could not turn round without holding on to the furniture. She could not feed herself owing to tremors. She was unable to lie down in bed herself. When trying to do so she put one knee on the edge of the bed and then fell heavily on to the bed in a semi-prone posture, from which she was unable to move without assistance. She perspired excessively and would not allow herself to be covered by more than a single sheet.

CASE 4.—A married woman, aged fifty years, was admitted to the hospital on March 1st, 1897. Her mother's sister had paralysis agitans. Four years previously, a fortnight after her last confinement, the patient noticed tremor of the fingers of the left hand on movement. Stiffness of the left arm and later of the left leg had since developed. Within the last two years the right side had become stiff, the arm being affected before the leg. For about two years she had noticed in walking that the toes of both feet occasionally curled under the soles, except the big toes, and she had to stand still for a few minutes until this passed off. She had had great difficulty in turning in bed for the past six months. On admission she had the typical face of paralysis agitans, "interosseal" attitude of the hands, stooping head, festinant shuffling gait, and marked retropulsion. The speech was monotonous and festinant. All the voluntary movements were slow and stiff, especially on the left side. She had difficulty in doing her hair herself; she could not use her left hand easily to "gather" the hair. There was very slight tremor in the left hand, this occurring only on holding it out, not when it was at rest.

CASE 5.—A man, fifty-three years of age, was admitted to the hospital on Dec. 4th, 1896. He was left-handed. For four years he had noticed that the toes of his right foot occasionally became stiffly flexed into the sole; the hallux, however, became hyperextended. About two years previous to his admission he began to have slowness and tremor in writing with the right hand, and about a year afterwards his right leg began to shake, especially in walking. On admission he had the typical symptoms of paralysis agitans in the right face, arm, and leg, there being both tremors and rigidity. The gait was shuffling but not festinant. He could voluntarily stop the tremors for a moment.

In 3 of the above 5 cases the "toe-curling" symptom was the earliest to appear, preceding the other symptoms by intervals of four months (Case 1), a year (Case 2), and two years (Case 5) respectively.

Since the above paper was written I have been kindly favoured by Dr. Ormerod (to whom I had mentioned this symptom) with the notes of another corroborative case in which the patient, after having had the "toe-curling" symptom for five years, developed symptoms of paralysis agitans.

CASE 6.—The patient, a man, aged forty-four years, consulted Dr. Ormerod in March, 1892, for a "drawing under of the toes of the left foot. This came on chiefly after walking, all the toes becoming flexed, beginning with the big toe and then the ankle becoming inverted. The symptom had been present since 1890. Dr. Ormerod writes: "At that time I do not think there was anything in his symptoms or general appearance to make me suspect that he had paralysis agitans. In May, 1895, he came again and there was no doubt that he now had paralysis agitans. There were characteristic tremors of both hands and the facies was that of paralysis agitans; the gait was not very characteristic. The affection of the left foot still continues; it looks shorter and more humpy than the right."

Queen-square, W.C.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TWO CASES OF PUERPERIUM COMPLICATED WITH SCARLET FEVER; RECOVERY.

BY J. GAWLER MURRAY, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

THE following cases may be of interest, showing that pregnant women seldom develop scarlet fever (Haultain).

CASE 1.—I attended the patient on May 24th. The child was born on my arrival and the placenta came away quite easily. I visited the patient on the 26th, 27th, and 28th, her temperature never being above 99·2° F. On the 29th I found her looking very ill and with a temperature of 105°. I immediately douched out the uterus with iodine and water and ordered the nurse to give a vaginal douche of weak Condy's fluid every two hours as the discharge was very foul-smelling. I called in the afternoon to repeat the intra-uterine douche and found the patient's temperature to be

105·8°. On calling in the evening her temperature was found to have fallen to 103·4°, but I repeated the douche of iodine. The temperature on the next morning was 102·4° and the patient was found to be covered with a typical scarlatinal rash and she complained of sore-throat. My father (Dr. Ivor Murray), whom I called in, confirmed my diagnosis and notified scarlet fever. On making inquiries I learnt that two children of the previous tenant of the house had had scarlet fever there in the previous October; the patient and her husband came into the house in November. This was the only clue to contagion which I could get, as the patient had not been near any scarlet fever cases and I had not myself seen any for six months previously. This, I think, points to the indefinite incubation period of scarlet fever in pregnant women. The baby also took the infection, but both mother and child made uninterrupted recoveries, both desquamating freely.

CASE 2.—A sister-in-law of the above patient who was in daily expectation of being confined and who lived next door had, of course, seen her sister and the baby before I had any suspicion of anything being wrong, but when the temperature of the first patient rose I forbade her sister-in-law to enter the house, and at the confinement of the latter on June 5th I took every precaution and was careful to put on fresh clothes. On June 8th, however, the patient's temperature ran up to 104° F., and she had a strawberry tongue and sore-throat, but there was no definite rash. Knowing that she had been exposed to contagion I treated her as for scarlet fever. In spite of diaphoretics, quinine, Warburg's tincture, &c., her temperature oscillated between 101° and 104° for fourteen days, when it went down to 99°. Owing to sleepless nights I had given trional (20 gr.) with good result, but on the 23rd I found that she had taken a violent dislike to nursing her baby and to her husband and that she fancied herself to be a feather and that she would blow away. On the 25th she complained of her left arm being swollen and on examination I found a hard lump in the axilla. I wrapped the arm in wool and kept her quiet, but it swelled to twice its size till under massage it gradually decreased. Her urine contained a slight amount of albumin and her legs were slightly swollen, but as she recovered strength her urine became normal. She desquamated very slightly. The mania lasted about a fortnight and she is now as strong and well as ever she was. This case I think interesting because of the number of complications which had to be contended against.

Scarborough.

A NOTE ON AMPUTATION FOR CHARCOT'S JOINT DISEASE.

BY F. A. SOUTHAM, M.B. OXON., F.R.C.S. ENG.,
SURGEON TO THE MANCHESTER ROYAL INFIRMARY; LECTURER ON OPERATIVE SURGERY, OWENS COLLEGE.

ABOUT six years ago a case of Charcot's joint disease came under my care in which the ankle-joint had become so completely disorganised that the foot was displaced upwards and outwards, the internal malleolus projecting prominently through an opening in the skin; in fact, the appearance was not unlike that met with in an unreduced compound Pott's fracture. Removal of the foot was the obvious treatment, but in the absence of any definite information on the question of amputation in patients suffering from Charcot's joint disease, and, bearing in mind the unsatisfactory results which often follow amputation for perforating ulcer in tabetic subjects, I was hesitating somewhat as to the advisability of adopting this course, when a short article by Mr. Jonathan Hutchinson, published a few months previously in the Archives of Surgery,[1] attracted my notice. Mr. Hutchinson wrote as follows: "I have recently had an opportunity of observing the process of repair after amputation in a state of advanced locomotor ataxy. It may be of interest to record the result, since, owing to absence of any experience on the point, I felt some misgivings in recommending the measure." Details were then given of the performance of Teale's amputation in a middle-aged subject who for ten years had suffered from locomotor ataxy accompanied by perforating ulcer and disease of the bones of the foot and ankle-joint. The result of the operation was extremely satisfactory, the patient recovering with a sound stump, which was afterwards fitted with an artificial limb and bore pressure well.

Encouraged by Mr. Hutchinson's success I advised my patient, a male, aged forty-nine years, to submit to amputation of the leg below the knee-joint, and to this he readily consented, being anxious to be rid of the foot, which, though it caused him no pain, had become a great inconvenience to him. Since then I have performed the same operation in three other patients, all males between forty and fifty years of age, for a similar condition, the ankle-joint being affected in one case and the tarsal joints in the other two. In all four patients the result has been most satisfactory, the stumps healing quickly without suppuration and without any tendency to sloughing of the soft tissues or necrosis of the end of the bone, as might have been expected from the nervous origin of the disease.

It is somewhat strange that in most works on surgery little or no reference is made to the question of operation in cases of locomotor ataxy when a joint has become completely disorganised. In a recent text-book the following paragraph, however, appears: "In the later stages, where the joint is entirely disorganised, some form of fixed apparatus may be applied to render the limb more useful, since no operative treatment can be undertaken."[2] A similar opinion is expressed in one of the most recent German works on nervous diseases, for it is there stated that though the joint affections may require some mechanical support surgical treatment is seldom necessary, operative interference being avoided by most surgeons.[3]

Manchester.

[1] Archives of Surgery, Oct. 1891, p. 137.

[2] Rose and Carless: A Manual of Surgery, p. 585.

[3] Oppenheim: Lehrbuch der Nervenkrankheiten, vol. ii., p. 145.

NOTES ON A CASE OF PERSISTENCE OF HYMEN; NON-RUPTURE.

BY N. CULLINAN, M.D. BRUX.

THE following case having come under my notice may be of interest to the readers of THE LANCET from a medico-legal point of view as well as on account of the obstruction which may be caused during the second stage of labour.

On March 13th, 1898, I was called to attend a primipara, aged twenty-five years. On making my visit and questioning the midwife I found that the patient had been in labour for nine hours, the pains then recurring about every seven minutes. On attempting to make a vaginal examination I found that an obstruction existed and the parts were tender to the touch, which latter sensation lasted a considerable time. Having determined the position of the fœtus by an abdominal examination I resolved to await results. The labour progressed naturally until a fulness could be noticed in the perineum. A visual examination now confirmed the conclusion which I had previously arrived at; the membrane was intact except for a small opening which would allow the escape of the menstrual fluid, situated in the antero-posterior line about one-third from the anterior and two-thirds from the posterior edge of the vaginal opening, the aperture being of sufficient size to admit an ordinary slate-pencil. The clitoris was of abnormal length and sensitive. On attempting to enlarge the opening in the hymen with the tip of the little finger the patient complained of intense pain and I decided to desist. I then used a hernia knife, making a crucial incision, and the succeeding pain caused the protrusion of the membranes well into the opening made. After making a vaginal examination and allowing the liquor amnii to escape the labour terminated naturally, no laceration taking place. The patient made a good recovery.

The points of interest in this case are as follow: (1) the non-rupture of the membrane although the patient had been married for eleven months; (2) the membrane itself was of a fibro-elastic consistence and extremely dense; (3) the small opening allowing impregnation to take place; (4) the abnormal sensitiveness of the parts; (5) an unusually large clitoris; and (6) the obstruction caused during the second stage of labour with the amount of force necessary to cause rupture. From a medico-legal point of view cases of this sort are of much importance showing that impregnation can take place without rupture of the hymen, that the presence of the membrane is not a positive proof

of virginity, and therefore it behoves a medical witness to be careful in giving an opinion, for if he swears that a woman is a virgin and later she turns out to be pregnant he may involve himself in legal proceedings as well as perhaps the loss of his reputation. On the other hand, the absence of the hymen does not prove that defloration has taken place. Such a condition may exist from ulceration, masturbation, &c.

Pontymister, Monmouthshire.

NOTE ON STAINING THE CAPSULES OF PNEUMOCOCCUS AND OF THE BACILLUS OF FRIEDLÄNDER.

BY ALFRED MACCONKEY.

(*From the Bacteriological Laboratory of Guy's Hospital.*)

RIBBERT'S observation that dahlia is useful for staining the capsules of pneumococcus has not met with the attention it deserves, as there are very few references to it in the text-books. Dahlia stains the cocci well and their capsules faintly. Bleu de Roux (dahlia with methyl green) gives a better result when slightly warmed; and the addition of fuchsin effects a still further improvement. The following combination gives a clear image which photographs well: dahlia, 0·5 gramme; methyl green (0 0 crystal), 1·5 gramme; saturated alcoholic solution of fuchsin, 10 c.c.; distilled water to 200 c.c. The dahlia and methyl green are rubbed up in a mortar with part of the water until dissolved, then the fuchsin is added, and finally the rest of the water.

Staining.—Prepare the film in the usual way. Flood the cover slip with the stain and hold over the flame until steam begins to rise. Then place aside for about five minutes, wash in water, dry, and mount in xylol balsam. N.B.—If the film is treated with acetic acid before staining the result is not so good.

This serves as a good general stain and gives good results with the bacillus typhi abdominalis, bacillus coli communis, and especially with the Klebs-Löffler bacillus.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF INTUSSUSCEPTION TREATED BY LAPAROTOMY; RAPID RECOVERY.

(Under the care of Mr. RICKMAN J. GODLEE.)

WE have recently[1] published cases demonstrating the value of early operation in intussusception, but the importance of adopting this method of treatment could not be more satisfactorily demonstrated than in the case reported below. The early age of the patient and the severity of the symptoms would soon have led to a fatal termination, and the difficulty with which the bowel was reduced by manipulation renders it impossible to believe that any form of injection or inflation could have effected the reduction. But inflation has dangers of its own: it has led to rupture, it may appear to succeed though the bowel is still tightly grasped, and by its use very valuable time is lost. For these reasons, and in view of the results obtained by laparotomy in many cases, it can now hardly be maintained that inflation is justifiable, except in cases where the parents refuse to allow a cutting operation. In Mr. Godlee's case the patient was only six months old, and though recovery has been recorded in several instances at an earlier age, yet it is noteworthy how rapidly the child recovered, for he was discharged perfectly well on the seventh day. For the notes of the case we are indebted to Mr. Montague Dixon, house surgeon.

A male infant, aged six months, was taken by his mother to the out-patient department of University College Hospital at midnight on Sept. 28th, 1898. The history given by the mother was that at six o'clock that evening the child vomited and that the vomiting was repeated at intervals until about 10.15 P.M., when he passed "some blood and slime from the back passage." He had been crying a good deal and had been restless, drawing the legs up and appearing to be in pain. The infant was doubly ruptured, was breast-fed, and had had no previous illness. On examination he was seen to be a fine fat child. He was pale and seemed to be in pain. The knees were drawn up and there was evidently abdominal pain. The pulse was small and rapid. On palpation of the abdomen some tenderness was evident and the child showed his resentment by crying. Passing from the right side just below the costal margin to the epigastrium a sausage-shaped, curved tumour was felt characteristic of an intussusception. It moved with respiration, and palpation of it caused more screaming than palpation of the rest of the abdomen. Rectal examination revealed nothing. The abdomen was cleansed and disinfected and the child's limbs and chest were bandaged in wool. Chloroform was administered and the abdomen was opened by a longitudinal incision about 2 in. in length just above the umbilicus and a little to one side of the linea alba. On drawing out the transverse colon a large intussusception was seen. The greater part of this was very easily and rapidly reduced by the ordinary manipulation, but the reduction of the last part was difficult. Of this last part the lower few inches of the ileum and the first portion of the ascending colon with the cæcum formed the intussusceptum, while the remainder of the ascending colon constituted the intussuscipiens. On firm pressure no effect was produced for a moment, when suddenly the reduction began to be effected and the portion of large intestine forming the intussusceptum shot out and became the intussuscipiens, leaving therefore only the lower few inches of the ileum as intussusceptum. On continued manipulation this also was reduced, completing the reduction. The portion of ileum which had been invaginated was remarkably stiff and inelastic owing to exudation into its substance, and remained out of shape while under observation, forming a sort of flat, oval tumour about 2 in. long by 1 in. wide. The whole bowel was, however, in good condition, the circulation throughout being maintained. The appendix was found to be quite normal and not even congested. The case was therefore of the ileo-colic variety. On the next day (Sept. 29th) the patient was doing splendidly. The mother continued to suckle him. He had vomited twice during the night. The temperature was 100·8° F. and the pulse was 168. No flatus had been noticed. At night the child vomited once and passed a stool containing a little blood and mucus. The stool was not green but was darker than normal and rather watery. The temperature never rose again as high as 100·8° during recovery. The patient was discharged on Oct. 4th, having been in hospital six days, and he had recovered completely from his trouble.

Remarks by Mr. GODLEE.—The case demonstrates the advantage of early operation. Had inflation been tried the modification in the shape of the tumour would have suggested that reduction had been accomplished; but the operation showed that this was absolutely impossible. It was difficult to effect even at this early period after the onset of symptoms, and a few hours' delay would have probably rendered excision of part of the gut necessary.

[1] THE LANCET, July 30th, 1898, and August 20th, 1898.

SALFORD ROYAL HOSPITAL.

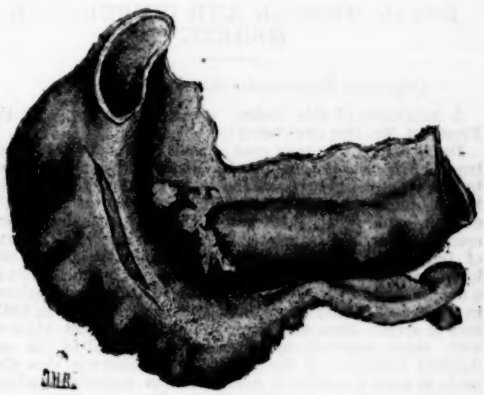
A CASE OF ACUTE ILEO-CÆCAL INTUSSUSCEPTION; LAPAROTOMY AND REDUCTION; NECROPSY.

(Under the care of Mr. J. H. RAY.)

THE following case is chiefly remarkable for the great acuteness of the symptoms; the intussusception commenced apparently at three o'clock in the morning, and the child died about twenty-four hours later. The younger the patient as a rule the more severe are the symptoms and the greater the probability of a fatal issue. This is due to two causes: in the first place, young children stand very badly the shock

due to the bruising of the bowel and of the intestinal nerves; and secondly, the younger the child the smaller the lumen of the gut. The fatal result in this case is no argument against operation; on the contrary, it enforces the lesson that in most cases of intussusception early operation offers the only chance of saving the patient's life. The condition found at the laparotomy demonstrated clearly that no procedure other than an operation could have reduced the intussusception; and it is highly probable that if reduction had been effected only a few hours earlier recovery would have ensued.

A child, aged nine months, was taken to the Salford Royal Hospital by his mother on April 16th, 1898, about 6.30 P.M., suffering from severe peritonism as the result of an acute intussusception. The mother gave the following history. The child had always appeared to be healthy and had required no medical treatment since birth. At about 3 o'clock in the morning on April 16th the child suddenly commenced to cry, seemed to be in great pain, and rolled about restlessly. Vomiting soon appeared as well as a kind of diarrhœa with much straining; many of the later attempts at evacuation of the bowel, however, only gave rise to a discharge of almost pure blood in varying quantity and mixed at first with mucus. As these symptoms did not abate a medical man was called in, later in the day, and he advised the removal of the child to the hospital. Mr. J. H. Ray saw the patient immediately on admission. The child, who was well nourished, looked extremely ill, with pale, slightly cyanosed face and with limbs hanging helplessly. He seemed, as was observed by a bystander, to be "too ill to cry." The abdomen was slightly tumid, and beneath the lower half of the left linea semilunaris an elastic, elongated, slightly tender swelling was to be felt, whilst another elastic mass could be made out with less distinctness about midway between the left costal margin and the umbilicus. Over the right iliac fossa there was some sinking-in and on palpation lessened resistance could be made out in this situation. A finger introduced per rectum could feel nothing abnormal, but came away streaked with blood, which was also noticed on the child's linen. A diagnosis of acute ileo-cæcal intussusception was made, and by rectal injections of olive-oil and of warm water it was attempted to reduce the swelling. This failing, and only leading to the discharge of more blood, Mr. Ray performed median laparotomy at 7 P.M., making an incision from a little above the umbilicus down to the pubic region. Through this incision it was an easy matter to confirm the diagnosis, but as it was found impossible to reduce the intussusception *in situ*, the entire tumour was brought through the laparotomy wound and surrounded by towels wrung out of hot normal saline solution. The intussusception was about 18 in. long, and owing to the attachment of the mesentery and mesocolon was coiled into nearly two turns of a spiral having a diameter of rather more than 3 in. The apex of the swelling was in the sigmoid colon but beyond reach of ordinary rectal examination. By uncoiling the swelling and so relaxing the mesentery during reduction it was found comparatively easy to express the intussusceptum from the intussuscipiens, always beginning about half an inch beyond the apex. The last few inches were somewhat more difficult to disengage owing to the presence of the twisted appendix, and when completely reduced a longitudinal rent was noticed in the serous and outer muscular coat of the cæcum and ascending colon, situated almost midway in the appendicular band, as shown in the illustration, and involving this for a distance of 1½ in. The tear did not involve the circular muscle fibres and was probably of some hours' standing, for its edges were infiltrated with blood, were swollen and slightly everted, whilst there was no bleeding from the edges at the time of reduction or later. The appendix was of medium length and provided with a well-marked meso-appendix. The cæcum was covered almost entirely by peritoneum and there was a fairly long ascending mesocolon. At the junction of the ileum and the cæcum there were some masses of subperitoneal fat, as shown in the illustration. The posterior surface of the cæcum and the colon was much congested and somewhat bruised, whilst the ileo-cæcal valves were of much increased thickness as felt through the ileo-cæcal junction. The abdomen having been sponged out in the operation area and a little iodoform and boric acid powder dusted on to the injured gut in the neighbourhood of the appendicular band the parietal wound was closed with silkworm-gut sutures and the child was sent back to bed about 7.30 P.M. There was very little sickness immediately after the operation and dilute brandy and milk were given by the mouth and retained, but the child never rallied fairly from his original condition of shock and died about nine hours after the operation. The only temperature taken, about two hours after the laparotomy, registered 97° F.



The ileo-cæcal junction and appendix. Showing the rent in the cæcum and the masses of fat at the junction of the ileum and cæcum.

Necropsy.—An examination of the abdomen post mortem showed that there had been no return of the intussusception. The above illustration represents a drawing which was made of the ileo-cæcal segment of gut shortly after removal. It shows the longitudinal rent in the appendicular band, which was due, Mr. Ray believes, to the excessive tension on this region when inverted and lying near to the apex of the intussusception and in the immediate vicinity of the tucked-in appendix. This rent might have been caused in reduction when turning out the last portion of invaginated bowel and the appendix, but no excess of force was at any time used in reducing the swelling, and, as stated above, the character of the edges noticed at the time of the operation and the absence of any bleeding or oozing points would indicate that this lesion, as well as the bruising on the posterior aspect of the cæcum and ascending colon, were due to the force of the invagination; and they suggest how severe must be the impression on the nerves of the peritoneum by such acute cases of intussusception. An examination of the ileo-cæcal orifice showed this to be patent, though narrowed by congested mucous membrane, and there was no polypoid or other growth or foreign body within the gut to account for the immediate onset of intussusception. The appendix appeared to be quite normal in structure and its lumen was not obstructed in any way.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—A successful bazaar was held at St. Austell, Cornwall, on Nov. 3rd, in aid of the funds of this hospital, and as a result £180 will be handed over to the funds of that institution.

WEST OF ENGLAND EYE INFIRMARY.—The annual meeting of this institution was recently held at Exeter under the presidency of the Rev. W. H. McGrath. The medical report showed that during the year 2779 patients had been under treatment, of whom 2404 had been discharged benefited. A total of 95,202 patients has been treated since the opening of the infirmary in 1808. The financial statement showed that the receipts for the year amounted to £1280 and the ordinary expenditure to £1331. Since the last annual meeting £4000 had been received towards the building fund, and as the total amount was now £7000 it was decided to immediately commence the first part of the building, which the architect estimated would cost £8500. The committee hope to receive further subscriptions so as to enable them to carry out the remainder of the scheme, which would comprise nearly the whole of the administrative portions, including operation rooms and isolation wards, all of which are urgently needed.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Congenital Hypertrophic Stenosis of the Pylorus.

A MEETING of this society was held on Nov. 8th, the President, Mr. BRYANT, being in the chair.

Dr. EDMUND CAUTLEY read a paper on Congenital Hypertrophic Stenosis of the Pylorus. The condition illustrated by the cases described was one in which the pylorus of the infant was found post mortem to be represented by a well-defined, cylindrical, thick-walled tube, with its lumen exceedingly small or completely occluded. The affection was of importance in its immediate effect on the life of the infant, and probably also in its relationship, when present in a modified form, to the hypertrophic stenosis of the pylorus in adults. The first case of the kind was recorded in 1841, and a search into the literature of the subject yielded, with those reported by Dr. Cautley, a total of 20 undoubted instances of the condition. Reference was also made to some less marked cases, some in patients examined post mortem and others in patients who presented characteristic symptoms and yet recovered. One of the cases under Dr. Cautley's observation was that of a male infant who died in the fifteenth week of life from vomiting and marasmus. There was apparently no inherited taint and nothing in the condition of the child at birth to indicate disease. Constipation was present from birth and vomiting began at the age of three weeks and persisted. Another abnormality was present—viz., a large cavity in the right hemisphere of the brain. The second case was that of a male infant who died in the eighth week of life "in a fit." Vomiting had commenced a few days after birth and the child rapidly wasted. The following were regarded as characteristic features of the disease: (1) vomiting, occurring without apparent cause and persisting in spite of treatment; (2) the absence of bile from the vomited matter; (3) obstinate constipation; (4) marasmus; (5) the presence of a tumour in the region of the pylorus; (6) the absence of abdominal distension except from dilatation of the stomach itself in some instances; and (7) the absence of signs or symptoms of gastritis and of the more common forms of intestinal obstruction. The influence of inherited disease, family predisposition, and sex were apparently unimportant. The child had usually been noted "a fine baby born." Symptoms might occur within a few days of birth or later in life, but almost invariably within the first month. The pathological changes were illustrated by specimens. In each case the pylorus was about an inch long, forming a firm, thick, elongated tumour, well defined at either end, and of about the size of the last joint of the little finger. The thickening was clearly seen to be due to a relatively immense hypertrophy of the unstriped circular muscle-fibres forming the middle coat of the pylorus. The other changes which might be present in the pylorus, stomach, and œsophagus were secondary to the stenosis produced by the contraction of this hypertrophied muscle. Thus the mucous membrane was thrown into longitudinal folds and appeared to be thickened, but microscopical examination showed that there was no actual thickening of this layer. It was due to the contraction and was an important factor in the production of the stenosis, blocking up the already narrowed lumen. The stomach and œsophagus might be dilated, and the former might present signs of secondary gastric catarrh. Diagnosis depended entirely on the characteristic symptoms arising during the first few weeks of life and the presence of a tumour. The tumour had been noted in two cases during life. Treatment must be merely palliative unless the presence of the tumour could be demonstrated. In such a case Dr. Cautley suggested surgical measures as offering the best prospect of cure. No explanation was given of the cause of the condition, but it was suggested that it might result from a redundancy of fœtal growth, due to the anxiety of nature to provide an efficient pyloric sphincter.

Dr. NORMAN MOORE referred to the point mentioned by Dr. Cautley, that the hypertrophy was sharply limited to the pylorus, and said that it was of interest in connexion with the similar limitation observed in specimens of epithelioma of the pylorus which rarely if ever extended down into the duodenum. He thought that this suggested that the pylorus was the point of junction of the two processes from which the alimentary canal was developed.

Dr. H. D. ROLLESTON said that since Dr. Cautley had written his paper he himself had recorded a similar case, in which, however, no tumour could be detected during life, and Dr. Metzler had also published several cases this year in America. The most interesting question was in connexion with the causation. It was difficult to put aside the theory of Dr. John Thomson of Edinburgh that the condition was due to spasm. Dr. Thomson suggested that it might be due to the fœtus absorbing amniotic fluid, which in these instances acted as an irritant and so set up the spasm. Dr. Metzler, however, in opposition to this view, maintained that there was no proof that spasm of the pylorus gave rise to hypertrophy. Dr. Rolleston thought that the change was confined to the muscular coat, and that any change in the submucous coat was due to compression, and that any thickening of the mucous membrane was of a catarrhal character, secondary to the spasm. He referred to a specimen of similar hypertrophy of the œsophagus occurring without known cause in a man, aged fifty-four years, which he showed at a recent meeting of the Pathological Society.[1]

OBSTETRICAL SOCIETY OF LONDON.

Tubo-Abdominal and Tubal Pregnancy.—Exhibition of Specimens.

A MEETING of the society was held at 20, Hanover-square, W., on Nov. 2nd, Dr. C. J. CULLINGWORTH, President, being in the chair.

Mr. BLAND SUTTON read two papers on Tubal Pregnancy. The first paper consisted of the record of a case of tubo-abdominal pregnancy in which a woman, twenty-four years of age, conceived in her left Fallopian tube, and the pregnancy went to term. The fœtus escaped from the amnion, and at the operation was alive and among the intestines, merely tethered by the umbilical cord. The placenta was removed without difficulty and with a very trifling loss of blood. The mother recovered but the child only survived extraction three hours. The second paper consisted of criticisms and deductions based on a report of a specimen presented to the society by Mr. Alban Doran in May, 1898, described as Hæmorrhage from the Fallopian Tube without Evidence of Tubal Pregnancy. Mr. Sutton's object was to prove that the specimen was an excellent example of "complete tubal abortion." This contention was supported by a re-examination of the specimen and illustrated by additional cases. Criticism was also extended to some other records recently published in the society's Transactions.

Mr. ALBAN DORAN wished it to be remembered that his communication was designedly entitled "Hæmorrhage from the Fallopian Tube *without Evidence* of Tubal Gestation," and not "*independent* of tubal gestation." In his paper he further declared: "I am very suspicious of alleged cases of hæmorrhage from the tube into the peritoneum not due to tubal gestation." He would have been much interested to see a demonstration of chorionic villi found in the clot in his specimen, but Mr. Sutton and Mr. Shattock had failed to find any. Walther had also uttered a warning against taking almost structureless fibrinous deposits for villi. There was no reason why clots from the tube not associated with tubal gestation and abortion should not be smooth and elliptical. As chorionic villi had not been found the case, in his opinion, remained not proven.

Dr. MCCANN said that the case which was the subject of discussion came under his care. The patient had suffered for some weeks from constant and copious discharge of bright red blood which in his experience was quite exceptional. In another case the dilated tube contained an ovoid blood-clot with a small central cavity. A careful examination of the clot and the tubal wall failed to detect chorionic villi. This case was probably one of hæmato-salpinx not caused by tubal pregnancy.

Dr. EDEN said that a good deal of care was necessary in

[1] THE LANCET, Nov. 5th, 1898.

examining masses of blood-clot for chorionic villi. He had known fibrin rings and sections of the tubal plicæ exhibited as chorionic villi. If a careful search had been made, in Mr. Doran's opinion, and no villi were found he thought it pretty certain that it was not a mole.

Dr. AMAND ROUTH said that Mr. Bland Sutton's paper had brought out clearly the fact that after tubal rupture the Fallopian tube might recover itself and look normal in a few days, and after tubal abortion had been proved to have resumed its normal size and appearance even in a few hours.

The PRESIDENT was glad that Mr. Sutton had called attention to the question as to what happened in cases of pelvic hæmatocele from incomplete tubal abortion where the tubal mole remained in the tube after the hæmatocele had undergone absorption. It was a question on which more light was needed. He himself was disposed to agree with Mr. Sutton that an unremoved or unexpelled tubal mole was apt to cause trouble and he was not sure that it was not a source of serious danger to the patient. He had seen a case in which the mole-containing tube had become twisted on its axis, with results similar to those which occur when the pedicle of a small ovarian cyst becomes twisted. He had also seen a case where there was reason to believe that the mole had become septic and set up peritonitis.

Mr. BLAND SUTTON, in reply, contended that it was idle to deny that the clot in question was the product of tubal pregnancy. A tubal mole with such definite characters indicated that it was the result of tubal pregnancy as clearly as a potato was known to be the product of Solanum tuberosum. The difficulty of detecting the villi was probably due to the fact that the mole had been extruded from the tube many weeks. In reply to Mr. Targett he observed that in some cases of tubal abortion villi were demonstrable in the tube; in other cases the tubal mucous membrane was quite smooth.

The following specimens were exhibited:—

Mr. ALBAN DORAN: (1) Fibroma of the Broad Ligament, weighing 44 lb. 8 oz., successfully removed from a woman aged twenty-eight years; and (2) Sarcoma of both Ovaries.

Dr. TATE: Sloughing Fibro-myoma of the Uterus occurring twenty years after the Menopause.

Mr. BUTLER-SMYTHE: A Microscopic Section of Chorionic Villi from a Case of Tubal Gestation.

Dr. AMAND ROUTH: Uterine Appendages showing Hæmato-salpinx.

The PRESIDENT: Œdematous Subperitoneal Fibro-myoma removed by Hysterectomy.

HARVEIAN SOCIETY OF LONDON.

Malignant Disease of the Large Bowel.—Typhoid Fever.

A MEETING of this society was held on Nov. 3rd, the President, Dr. J. F. GOODHART, being in the chair.

Mr. W. H. BATTLE read notes of three cases of Malignant Disease of the Large Bowel, in each of which he had been called upon to operate for intestinal obstruction; in two cases the growth was removed at a subsequent operation, in one case it was excised at the time. They had been recently operated on at St. Thomas's Hospital and one still remains under treatment. The result in each had been satisfactory. Case 1, a very rare one, was that of a man, aged forty-four years, who had a history of stoppage of the bowels three years previously, but he had apparently recovered from that attack and was well until three months before admission, when he suddenly became bad again, with increasing abdominal distension, pain, and the passage of a good deal of blood from the rectum, but no vomiting. Growth could be felt in the rectum. This proved to be an intussusception with the growth in the intussusceptum near the apex. Right iliac colotomy gave relief. Some weeks later the apex of the intussusceptum and the growth were excised through the rectum. Finally, the artificial anus was closed and although this was not completely successful the man was rendered so much more comfortable that he refused further relief. Case 2 was that of a woman, aged twenty-nine years, who had been seen by the President the day before Mr. Battle operated for the first time. She had all the signs of intestinal obstruction of chronic character and the diagnosis of malignant growth of the large intestine, either descending colon or sigmoid flexure, was made. Exploration was carried out and showed a hard growth of moderate size in the splenic region. An artificial anus was made in the left linea semilunaris below the ribs as it was hoped that at a subsequent operation, when the woman was in a better state, it might be possible to excise the growth and the artificial anus at the same time. The first operation was done on August 24th and after admission to St. Thomas's Hospital the second operation was performed on Sept. 23rd. The artificial anus and the growth were excised, the ends of the bowel were closed, and a lateral anastomosis by suturing was effected with the best results. The patient was able to leave for her home about three weeks afterwards in a very satisfactory condition. Case 3 was that of a woman, aged forty-five years, who was admitted to St. Thomas's Hospital on August 4th with intestinal obstruction of a fortnight's duration. She had had much vomiting, abdominal pain, and increasing distension of the abdomen. A median incision showed the cause of the obstruction to be a cancerous stricture of the sigmoid flexure. A second incision in the left iliac region was well over the seat of the disease, and as the patient's condition was fair and the growth could be brought up it was excised by the method recommended by Paul and a tube placed in each of the divided ends of the gut. The two ends and the mesentery were sutured together side by side and brought outside with the tubes. A few stitches secured them to the abdominal wall. The obstruction was completely relieved and the patient was now undergoing treatment for the re-establishment of the intestinal canal, the septum being divided gradually by the application of clamp forceps. Her general state of health has much improved. In none of these cases was there apparent glandular disease. Mr. Battle dealt upon the advisability of treating similar cases before obstruction had set in and the patient's state had become much more serious. He considered that the operation of colotomy should be rendered much less frequent by an early removal of the growth when diagnosis had been made. The advantages of "short-circuiting" and lateral anastomosis were pointed out and he expressed himself as against the use of mechanical contrivances.—The PRESIDENT alluded to a case of chronic intestinal obstruction caused by a mass of new growth in the neighbourhood of the splenic flexure. The bowel was "short-circuited" by means of Murphy's tube. The symptoms were completely relieved by the operation and the patient had remained well ever since.

Dr. SIDNEY PHILLIPS read a paper on the Treatment of Typhoid Fever. He referred to the changes which occurred in typhoid fever, amounting in time to a change of type. This was seen in the lessened severity of abdominal symptoms of late years. Thus, while Murchison estimated diarrhœa in 1862 as occurring in 96 of 100 cases it occurred now in not more than about half. The lessened severity of abdominal symptoms corresponded with probably less severe ulceration and of late a good number of necropsies of typhoid fever cases without ulceration had been recorded. It appeared that local lesions specific to typhoid fever and intercurrent affections such as pneumonia could not account together for more than 5 of each 100 deaths, and the remaining 50 per cent. or more were due to toxæmia, pyrexia, heart failure, or asthenia. It was necessary in treatment to keep up failing heart power by tonics and food, but heart muscle weakened by disease failed to respond well to cardiac tonics. Diffussible stimulants were useful. Diarrhœa should be checked by enemas rather than by drugs given by the mouth. Hæmorrhage was often controlled by hamamelis. The chances of recovery from perforation were so remote that operation offered the best chance, but the difficulty in many cases was the diagnosis of perforation.—Mr. HAZEL asked for further information as to the indications for the use of stimulants in typhoid fever.—Dr. WILSON inquired as to the exact time after cessation of the fever when it might be considered safe to give solid food.—Mr. EASTES fully agreed with Dr. Phillips as to the uselessness of phenacetin, antipyrin, and similar drugs; any lowering of temperature which they produced passed quickly away and was followed by increased general depression. He did not employ cold baths, but always ordered wet pack (with or without ice).—Dr. JOHN BROADBENT thought that the cold bath treatment ought to be more generally adopted in this country, as its routine employment in America and on the continent had indisputably diminished the percentage of fatal cases.—Dr. H. A.

CALEY advocated increased attention to systematic hydrotherapeutic measures, adapted according to the nature and circumstances of individual cases, and confirmed what had been said as to the value of hamamelis in the treatment of intestinal hæmorrhage.—Dr. OWEN FOWLER gave his personal experience of the cold-bath treatment and pointed out the comfort experienced after the bath, the change from restlessness and fever to calm and rest.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

The Life and Times of John Milligan.—Strangulated Hernia.—Exhibition of Cases and Specimens.

A MEETING of this society was held at the Royal Infirmary, Bradford, on Oct. 25th, the President, Dr. BERRY, being in the chair.

The PRESIDENT gave his opening address on the Life and Times of John Milligan, surgeon, of Keighley, 1812-1876. He was born at Crosshills in 1812 and was apprenticed to a Keighley surgeon. He subsequently entered as a student at University College and Middlesex Hospitals and obtained the Licence of the Apothecaries' Society in 1834. He then returned to his native district and commenced practice. He was extremely industrious, beginning work at 5 o'clock in the morning and doing much of his work on foot—he often walked from 15 to 20 miles a day. In 1838 he was appointed first medical officer of the Keighley Union and public vaccinator. Mr. Milligan was an enthusiastic supporter of the Mechanics' Institute and frequently lectured there. He read widely in preparation for these lectures and paid much attention to works bearing on sociology and sanitation. Though he was much respected for his earnestness and enthusiasm for the public welfare in social and sanitary matters he was hindered in his work by popular ignorance and prejudice. His denunciations of the overwork and under-pay of the people and of the miserable hovels in which they lived doubtless often earned for him the dislike and opposition of employers and owners of property. In 1855 Mr. Milligan was appointed medical officer of health. By one who knew him intimately he was described as much in advance of his time in all sanitary matters and that he was much vexed by the popular indifference to such subjects. Among papers contributed by him to both the London and provincial press was one on the Prevention of Accidents in Mines, on Vagrancy and Crime, on Common Lodging-houses, and on Hospitals and Dispensaries. In 1849 he won the Fothergillian gold medal with an essay on the Influence of Civilisation on Health and Disease. In 1857 Mr. Milligan read a paper before the British Association at Dublin on a New Method of preserving Vaccine Lymph in Glycerine and on an Instrument for facilitating Vaccination. The method was to soak dried vaccine crusts in glycerine for six months and he apparently obtained results identical with those of arm-to-arm vaccination. Mr. Milligan was dexterous and successful as an operating surgeon under very unfavourable conditions, both as regards the patient's surroundings and also the lack of skilled assistance. He introduced the use of chloroform into Keighley, having first tried the effect upon himself. Apart from his professional work he interested himself deeply in local politics and tried to further the cause he thought worthy of support by both tongue and pen. He was much attached to the study of natural history in all its branches and was an authority on the local fauna and flora. He retired from active practice in 1866, retaining only his public health appointment until his death ten years later at the age of sixty-five years. A point of considerable interest was brought out by the lecturer in connexion with the attitude of the Keighley people to vaccination, Keighley now having one of the lowest vaccination rates in the country. In 1853 vaccination was made compulsory in England. Previously to this time Mr. Milligan was allowed to vaccinate at any time and on any day at his surgery or at the patient's houses, but most of the vaccinations were as a matter of fact performed during the warmer months of the year. The people were so alive to the value of the protection they gained from it that in outlying districts where medical men rarely went old women often performed the operation with a needle. The only anxiety felt was as to the source of the lymph, and so long as people were allowed to select this they raised no objection to the operation. When vaccination became compulsory and it was necessary to bring children at certain hours to a particular place then troubles commenced. Sometimes stations were a long way off and to reach them involved exposure in all kinds of weather, and this was felt to be intolerable for both mother and child. When the people found that by electing as guardians only such as would not enforce the compulsory clauses of the Act they could escape with impunity they were not slow to avail themselves of their privileges in this direction.—A vote of thanks to the President for his address was proposed by Dr. W. A. EVANS, seconded by Dr. RABAGLIATI, and carried unanimously.

Dr. ALTHORP related two cases of Strangulated Hernia exhibiting somewhat unusual features. The first case was that of a woman, sixty-six years of age, who for many years had had double femoral hernia, the left being irreducible for a considerable time. She was admitted to hospital with symptoms of obstruction and the vomiting was stercoraceous. The hernial sac of the left side was exposed and a pronounced gangrenous odour was at once perceived. On opening the sac it was found to contain a loop of large intestine about 8 in. long which was quite gangrenous. There did not seem to be any tight constriction at the femoral ring and the gangrenous bowel extended rather above this point. The wound was enlarged upwards through the femoral opening, the gangrenous bowel was cut away, and a large rubber tube was fixed into each cut end, the wound being left open. No fæcal discharge occurred through either tube and as the symptoms persisted the hernia on the right side was opened up after two days. A small piece of omentum, which was irreducible, was found in the sac and was removed. The symptoms persisted and the patient died two days after the second operation. A complete post-mortem examination was not allowed, but examination through the operation wound showed that there was a volvulus of the sigmoid flexure which had descended into the hernial sac and the descending colon was filled with hard fæces. The second case was that of a man, forty years of age, with a strangulated left inguinal hernia. Herniotomy was performed and there were found two sacs, one within the other, the inner containing omentum and bowel. Dr. Althorp described the condition as one of congenital inguinal hernia with a patent funicular process.

Dr. JAMES KERR showed two patients, mother and son, who each presented peculiar symptoms apparently as Sequelæ of Influenza. The mother, forty-seven years of age, together with the rest of the family, suffered from a febrile illness seven years ago, from which all the members except the mother and son recovered completely. In the case of the woman recovery from the influenza was much delayed, and at the end of two years she noticed failure of vision, the left eye being affected first and then the right. Three years ago the gait became weaker, unsteady, and reeling, and now the patient could not walk a few yards without great exhaustion. The affection of locomotion was ushered in by numbness of the feet and a sensation of walking on wool. There was no tremor of the hands and no wasting. Mentally she was quite clear, but rather emotional (inclined to tears). Sight was very bad—fingers were counted at a yard; faces were fairly well recognised, also colours. There was occasional (doubtful) nystagmus. The ocular movements were good; the pupils reacted sluggishly. Optic nerve atrophy was present on both sides. Taste and smell and sensibility were natural. Hearing was rather dull. The knee-jerks were exaggerated and ankle clonus was present. She could not stand without assistance. The gait was spastic and incoördinate. There was incontinence of urine and cystitis. The son, twenty-five years of age, had good health till he had influenza seven years ago. As in the case of the mother there was prolonged convalescence followed by failure of sight and power of walking. During the past year he had had difficulty in micturition. Mentally he was quite bright, but inclined to be emotional. Sight was bad; he counted fingers at a yard. He could not distinguish faces; colours were recognised. The pupils were dilated and reacted slightly to light. There was slight nystagmus on moving the eyes. The arms were muscular and slightly incoördinate. The legs were incoördinate; the knee-jerks were exaggerated; there was no ankle clonus. Sensibility was natural. Dr. Kerr remarked that there was a disseminated lesion affecting the central nervous system, probably toxic in origin. He stated that the commonest cause was syphilis but that similar cases had been described as following the specific fevers. The fact that both mother

and son were attacked showed a family susceptibility to this particular poison.

Dr. KERR also showed a girl, aged ten years, who had suffered from the disease called by Charcot Astasia Abasia. The symptoms came on after influenza. There was at first some difficulty in walking which culminated in complete inability to either stand or walk. She was treated by suggestion and in three days could walk well. There had been slight return of the symptoms consequent on over-exertion.

Dr. EURICH gave a Microscopical Demonstration.

Dr. GLADSTONE showed a number of Pathological Specimens including the Œsophagus of a child in which a halfpenny had been impacted for ten months. There had been a lateral pouch formed at the seat of obstruction.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Oct. 27th, the President, Dr. ALFRED ROBINSON (Rotherham), being in the chair.

Mr. SIMEON SNELL introduced: 1. Three instances of Entropion which had been treated by eschar by caustic potash (Theobald's method). The result in each case was excellent. 2. Three cases of Ectropion—(1) severe of the upper eyelid treated by division of subcutaneous bands and temporary union of the eyelids; (2) of the lower eyelid treated by raising a V-shaped flap and temporary union of the eyelids; and (3) from granular lids, treated by shortening the palpebral fissure and at the same time inverting the lower eyelid.

Mr. SNELL also related particulars of a case of Diphtheritic Conjunctivitis in a woman in which the bacillus of diphtheria had been discovered. Complete recovery resulted. He referred, also, to a case in an infant treated by antitoxin and to another in an elderly woman with well-marked membrane. In the latter the bacillus was not to be found; in the former the result of the bacteriological examination was not recorded.

Mr. PYE-SMITH showed a man on whom he had performed Colotomy by the method recently described by Mr. F. T. Paul as based on the principle introduced by Hahn in the performance of gastrostomy. It was easy and rapid in performance and had given a very good result. The patient was wearing a truss as recommended by Mr. Paul.

Mr. PYE-SMITH also showed a girl, aged eleven years, with Congenital Displacement of the Left Hip. There was 2 in. of shortening which could be reduced by half by traction, but she could walk and run well with a raised boot. A skiagraph showed that the head and neck of the femur were not much abnormal as regards size and direction.

Mr. ARCHIBALD CUFF showed and described a case of Double Congenital Dislocation of the Hip.

Dr. PORTER showed: (1) A case of Insular Sclerosis; (2) a case of Locomotor Ataxia in a woman; and (3) a case of Incipient Progressive Muscular Atrophy (?).

Mr. PRIESTLEY showed a case of Leontiasis Ossea.

Dr. WILKINSON showed a specimen of Ruptured Tubal Mole obtained by operation from a woman, aged thirty years. The patient had had three children, the last nine years ago. She missed two periods and a week later began "flooding." She had sudden severe pain in the lower abdomen a week later. Since that time up to the day of admission (four weeks) she suffered from intermittent hæmorrhage from the uterus and abdominal pain. A tumour was detected by vaginal examination to the left of the uterus, feeling like a distended tube. The sound passed 3 in. The abdomen was opened and many clots and blood-stained serum were found in the peritoneal cavity. The left uterine appendages were removed. They were found to consist of a distended Fallopian tube which had ruptured. Through a rent a mole protruded which was still attached to the distended tube in the unruptured portion. The patient made a good recovery. Dr. Wilkinson drew attention to the method of incising the abdomen by "going round" the rectus, which he thought was applicable at the inner as well as at the outer border of the muscle.

Mr. SIMON RYAN showed a very large Gall-stone removed from a patient under his care, a man sixty-three years of age, by Dr. Sinclair White.

Dr. SINCLAIR WHITE exhibited and made remarks on Renal Calculi (three cases) and skiagraphs of Old Dislocation of the Shoulder and Renal Calculus.

The PRESIDENT, Mr. PYE-SMITH, Dr. SINCLAIR WHITE, Mr. ARCHIBALD CUFF, Dr. ARTHUR HALL, Dr. GODFREY CARTER, Dr. A. ANDERSON, Dr. ADDISON, and Mr. RICHARD FAVELL made remarks on the cases and specimens.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on Nov. 3rd, the President, Dr. Macfie Campbell, being in the chair.—Mr. Rushton Parker read notes of a case of a Large Gumma of the Liver which formed a prominent tumour. Exploration was undertaken and the greater part was removed.—Mr. F. T. Paul spoke.—Mr. Richard Williams showed a patient from whom he had scraped a well-marked Lupus from the Palpebral Conjunctiva of the Upper Eyelid.—Dr. Grossmann alluded to the rarity of the affection. The diagnosis might be confounded with syphilis, trachoma, and, in some countries, with leprosy. Trachoma was, however, mostly bilateral and there were no characteristic organisms present. He had recently examined 100 cases of trachoma without finding any. He was in favour of treating lupus by scraping or galvano-puncture. Possibly the x rays might prove of service.—Mr. Thelwall Thomas mentioned a case of Lupus of the Conjunctiva of both upper eyelids in a young man whom he had seen. He had a small patch of lupus at the tip of the nose and he had probably inoculated himself on the eyelids. Scraping and the rubbing in of iodoform were successful.—Mr. Rushton Parker and Mr. Shears made remarks.—Mr. Robert Jones showed a case of Osteomalacia in an unmarried girl, aged twenty years, one of four cases which he had seen. All the bones were softened, spontaneous fracture having occurred in the tibia. The bones of the left limb could be moved in any direction. The fingers were clubbed, the thickening being confined to the terminal phalangeal joints. The radiographs demonstrated immense thickening of the long bones, striation suggestive of the partial disappearance of lime salts, and crenated borders. Mr. Jones suggested feeding with bone-marrow and, should this fail, he would remove the ovaries.—Dr. T. R. Bradshaw was surprised to hear that Mr. Jones had seen so many cases, the disease being so rare. Late rickets and cancerous infiltration of bones had sometimes been included in the records of cases of osteomalacia. Most important of all was the condition described as multiple myeloma, which was associated with great quantities of a kind of albumose in the urine. Dr. Bradshaw maintained that it was impossible to be sure of the true nature of the case exhibited without a careful investigation of the urine.—Mr. Clemmey spoke.—Mr. Hugh E. Jones read a paper on the Importance of the Early Detection and Treatment of Suppuration in the Tympanic Cavity and Mastoid resulting from Otitis Media. The mortality in complicated chronic suppurative otitis was still high in spite of the great progress made in operative treatment in recent years. The after history of successful cases was not always quite satisfactory. The radical tympano-mastoid operations, though of immense importance in the treatment of chronic cases, did not restore the ear to anything like its normal condition. With the exception of primary tubercle all the chronic cases began as acute ones; it was therefore highly necessary to thoroughly deal with acute cases. He described the course of acute otitis media and indicated the cases which required (1) paracentesis of the membrane, (2) exploration of the mastoid cells, and (3) opening of the mastoid antrum. The operations required at this stage were simple, easy of performance, and with ordinary skill perfectly safe.—Dr. Permewan agreed as to the advisability of early operation in acute cases. The real difficulty was in diagnosing mastoid complication; some cases of otitis externa and of tympanic inflammation alone closely simulated mastoid disease. Still, the only way to prevent acute cases becoming chronic was to operate early.—Mr. Robert Jones related four cases where he had opened up the lateral sinus and cleared the internal jugular vein. Two recovered.—Mr. W. M. Banks, Mr. Paul, Mr. Parker, Mr. Shears, Mr. Richard Williams, and Dr. Alexander spoke.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—An ordinary meeting of this society was held in the society's rooms at the West London Hospital on Nov. 4th, Dr. S. D. Clippingdale, President, being in the chair.—Dr. F. J. McCann read a paper on Cases illustrating Difficulties in the Diagnosis of Early Tubal Pregnancy. Three cases were described in detail and remarks were made on the differential diagnosis of early tubal pregnancy. Case 1.—The patient was a woman, aged twenty-seven years; she had been married three years and was sterile. Three weeks before she was seen she had an attack of pain in the left iliac region, accompanied by sickness and faintness. At that time she had missed her monthly period for fourteen days. On bimanual examination an elongated fluctuating swelling was felt to the left of the uterus. As the contents of this swelling were evidently leaking into the abdominal cavity an abdominal section was performed. The abdominal mass proved to be a dilated tube containing an ovoid clot with a small central cavity. No evidence of chorionic villi could be found. The patient recovered. Case 2.—The patient was a married woman, aged thirty-seven years; she had had four children, the youngest being two years old. After a period of three months' amenorrhœa she was suddenly attacked with pain in the right groin and thigh. The temperature varied between 101° and 104° F. The patient was very blanched and collapsed. The abdomen was distended and very tender. An elongated swelling was felt in the right posterior quarter of the pelvis. Abdominal section was performed and about a pint of blood-clot was found in the abdominal cavity. The swelling was a well-marked example of a tubal mole. The patient recovered. Attention was directed to the difficulties in the diagnosis of early tubal pregnancy. Other cases were mentioned. The significance of elevated temperature, irregular uterine hæmorrhages, passage of decidual membranes, and amenorrhœa were discussed. The last case described in detail exhibited many of the signs and symptoms of tubal pregnancy. At the operation, however, a dermoid cyst with a twisted pedicle was removed.—The paper was discussed by Dr. Alderson, Dr. Addinsell, Dr. Campbell Pope, Dr. Drummond Robinson, Mr. Atkinson, and Mr. Twynam, and Dr. McCann replied.—Dr. Addinsell then read a paper on Ovariotomy followed by Parotitis. The patient was an unmarried woman, aged thirty-five years, from whom in October, 1897, he removed a large multilocular ovarian cyst. There was a history of a severe sudden illness 5 months prior to the operation and lasting 6 weeks. There was found to be a twisted pedicle and the cyst was adherent to the bladder and uterus. The patient did well for 7 days. On the morning of the eighth day there was swelling of the left parotid gland. The temperature was 103° F., there was dryness of the mouth, and the submaxillary gland was involved. Suppuration did not occur and the patient left the nursing home at the end of three weeks. The origin of parotitis following abdominal operations was discussed, and it was pointed out that the cases collected by Mr. Stephen Paget in 1886 if carefully examined all pointed to a septic origin. Dr. Addinsell admitted the part played by the large network of sympathetic nerves in the abdominal and pelvic viscera, but he held that the lymphatic system must also take its share of responsibility. He thought that the cases relied on by Mr. Stephen Paget for establishing the theory of nervous origin were in reality cases of septic infection, and he considered that the whole weight of evidence was in favour of parotitis following operation being due to a mild form of sepsis.—The paper was discussed by Dr. McCann, Dr. Percival White, Dr. Gibbes, Mr. Stephen Paget, Mr. Bidwell and Mr. Keetley, and Dr. Addinsell replied.

BEDFORD MEDICAL SOCIETY.—A meeting of this society was held on Oct. 27th, the President, Mr. M. F. Cock, being in the chair.—Dr. G. P. Goldsmith opened a discussion on Diphtheria. He related his early experiences in 1859; next in 1863, when he had about 50 cases, and little children perished in large numbers at the end of a week or ten days from heart failure. He noted the great change for the better produced by the introduction of serum injections and pointed out the importance of early treatment. In about 20 cases recently under his care, all of which recovered, the serum was only used in the severe cases. In addition to the serum the throats were painted with a 1 in 1000 solution of perchloride of mercury and sprayed with sulphite of soda. He quoted statistics from 53 hospitals in which 7277 cases were treated with serum injections, with a mortality of 20 per cent., against a previous mortality of 44 per cent.—Mr. G. Robinson related a mild case in the swabbings from which no bacilli were found, but paralysis afterwards occurred.—Mr. Nash said that he and his partner had treated 50 cases since 1892 with 1 death. In 29 out of the last 32 cases bacilli had been found; in 25 cases serum injections were used, the number varying from 1 to 7 per head. Paralysis had occurred in 6 cases, 3 of which were treated with serum; one of these, which had 3 injections, died. Between June 29th and July 19th of this year he had seen 13 cases, all of which drank unboiled milk from the same dairy. Six other cases were heard of in the same period drinking the same milk and two or three cases which did not drink this milk. The latter were probably the ordinary sporadic cases.—Mr. A. Sharpin and Mr. T. J. Tonkin contested the milk origin of this epidemic.—Dr. F. B. W. Phillips related a puzzling case of Pustular Eruption on the hands of a child.—Dr. S. J. Ross, referring to Diabetic Urine, stated (1) that the appearance of albumin *per se* does not materially affect the prognosis; (2) the presence of diacetic acid and acetone does; and (3) he had noticed fatty casts in the urine appearing from 24 to 72 hours before the onset of coma.—Mr. Nash read notes of a case of Labour obstructed by an Ovarian Cyst in the Pelvis. The membranes had ruptured and the cord was prolapsed. The latter was replaced, the cyst was aspirated, and the child was delivered with forceps. The patient made an uneventful recovery.—Mr. Nash showed Congenital Cystic Kidneys from a child, aged six months. The colon was also malformed.—Mr. Nash also showed a Spindle-celled Cystic Sarcoma of the Gracilis and Adductor Longus removed from a man, aged sixty-eight years. The lump was first noticed by the patient eighteen months ago. In June of this year it was first seen by Mr. Kinsey and taken for a hæmatoma in the gracilis. It was incised by Mr. Kinsey and a large cyst was evacuated of its contained blood. It soon healed, but as it continued to enlarge was removed with much of the involved muscles. This patient's wife died in May, 1897, aged sixty years, from a malignant tumour of the sigmoid flexure.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, the President, Mr. T. Davies Pryce, being in the chair. The President delivered an address on Limitations in Medicine. He remarked that our limitations are many and meet us in every field of medicine, arising as the result of our restricted mental capacity, for the accepted doctrine of to-day is frequently the demonstrated error of to-morrow, from an overweening confidence in our knowledge causing us to accept a few facts as the whole truth and from a mental tendency to think in certain grooves. Often the brilliancy of some new discovery blinds us to the darkness of our knowledge, and thus we think the final goal has been reached while it merely marks a stage upon the road. What, he said, is known of the true nature of carcinoma, of hysteria, and melancholia? The frequent failure of past theories should ensure caution in accepting new views and practices. The "classification" of disease is necessary, but is often a hindrance, and none of the groups should be looked upon as final; phthisis and certain forms of pneumonia afford examples of recent emancipation from old forms of classification and are an instance of how a group of facts if taken alone may bear one interpretation, but which, if viewed by the light of further discovery, must necessarily be looked upon from a new standpoint and in consequence require a new interpretation. As an instance of how, by allowing our minds to think in a groove, we are apt to permit one important fact to obscure others of possibly equal value Mr. Pryce alluded to the acceptance of the water-borne infection of typhoid fever, and showed that many other possible sources of infection were thus disregarded. Another cause tending to confine and retard progress is a too ready assumption of knowledge which we do not possess, and the habit of taking refuge in expressions, the substitution of mere words for a definite explanation of observations, such as the terms "diathesis," "immunity," "predisposition," and the like.—A hearty vote of thanks was accorded to the President on the proposition of Dr. Cattle, seconded by Mr. Powell.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Nov. 4th, the President, Mr. D. H. Goodsall, being in the chair.—The President

showed two boys, aged five years, treated by the American Stirrup Weight Extension and lateral sandbags with a sheet over the limb for Femoral Fracture in the Mid-third. One of these raised his injured limb from the bed on the seventeenth day.—Dr. R. Ostlere showed a man, aged forty years, the subject of Chronic Glossitis of three years' standing, whose tongue had three ulcers of from 1 cm. to 3 cm. in diameter, with thickened, irregular edges and in part a sloughy base. The right half of the tongue was very markedly swollen. The patient had had various treatment, but had benefited by none except silver nitrate locally. There was no history of syphilis.—Dr. Leslie Durno showed a man, aged thirty years, a coach painter, the subject of Extensor and Interossei Palsy coming on eighteen months after the first of a series of eight attacks of colic due to lead. The sulphide line on the margins of the gum was well marked. There was no sensory symptom. The left hand was attacked two months after the right.—Mr. W. Campbell M'Donnell showed a man, aged twenty-eight years, the subject of Recurrent Rectal Carcinoma, for whom excision of the rectum was done thirteen months before. Recurrence was in the deep parts as well as the skin.—Dr. B. G. Morison showed a woman, aged twenty years, whose right first, second, and third Nails becoming longitudinally ridged separated from the nail-bed and were shed close up to the lunula. She was also the subject of brachial neuralgia. He thought the condition a tropho-neurosis.—Dr. E. F. Willoughby showed a specimen of False Membranes from a case of Mucous Colitis in a man, aged seventy years, whose complaint commenced in April, 1898, and, with relapses, went on till the end of October. Under the microscope the membrane showed no structure but mucous cells.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, Mr. G. A. Wright, President, being in the chair. — Mr. Southam made some remarks, which will be found in another column, on Amputation for Charcot's Joint Disease and mentioned four cases where the leg had been removed below the knee for disease of the ankle or tarsal joints. In each instance the wound healed quickly without suppuration, a useful stump resulting. The patients, who were males between forty and fifty years of age, presented other well-marked symptoms of locomotor ataxy.—Dr. Leech gave an account of the investigations made by pharmacists subsequently to the publication of the 1885 Pharmacopœia, which had showed that accurate dosage with the official preparations of belladonna and nux vomica was impossible, since however carefully such preparations were made their strength might vary widely owing to the difference in the amount of alkaloid contained in the crude drugs themselves. Hence the necessity for the changes made in the Pharmacopœia of 1898. He pointed out that the alkaloid contained in the maximum doses of the preparations of belladonna in the 1885 British Pharmacopœia varied from $\frac{1}{360}$th to $\frac{1}{75}$th of a grain. In the standardised preparation of the 1898 British Pharmacopœia the width of limit had been greatly lessened. The largest dose of the new tincture (15 minims) corresponded to $\frac{1}{115}$th gr. of alkaloids, the largest dose of the alcoholic extract to $\frac{1}{180}$th gr., these amounts being equivalent to about two-thirds and 1 drop of liquor atropinæ sulphatis respectively. The tincture and extract of nux vomica have been likewise rendered much less variable in strength than formerly by standardising according to the amount of strychnine instead of according to the amount of total alkaloid contained.—Dr. Ernest S. Reynolds made some remarks on the Uncertainty of Diagnosis of Cerebral Tumour and gave illustrative cases.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A general meeting of this society was held at 20, Hanover-square, W., on Oct. 31st, the President, Dr. W. V. Snow (Bournemouth), being in the chair. Dr. Snow referred to the loss sustained by the society by the death of Dr. Henry Lewis (Folkestone), who was the first President of the society.—The treasurer's report and balance-sheet were adopted after discussion by Mr. Blaker (Brighton) and Dr. Hyde (Buxton).—Dr. Snow then introduced the new President, Dr. Fortescue Fox (Strathpeffer Spa).—A vote of thanks to the retiring President was proposed by Dr. Symes Thompson, seconded by Dr. Ivor Murray (Scarborough), and carried. Dr. Snow replied.—A vote of thanks to the editor of the Journal was proposed by Dr. St. Clair Thomson, seconded by Dr. Gilbert (Tunbridge Wells), and carried. Dr. Hyde replied.—A vote of thanks to the treasurer and auditors was proposed and carried. Mr. Keetley, Mr. Ward-Humphreys, and Dr. Leonard Williams replied.—A vote of thanks to the council and secretaries was proposed by Dr. Younger, seconded by Dr. Gage Brown, and carried. Mr. Ward-Humphreys and Dr. Sunderland replied.—An ordinary meeting was then held, the President, Dr. Fortescue Fox, being in the chair. The President delivered an impressive address on the Province of the Spa Physician, which evoked great interest and attention.—Dr. Ewart proposed, and Mr. Bowen Davies (Llandrindod Wells) seconded, a vote of thanks to the President for his address and Dr. Fortescue Fox replied.

HUNTERIAN SOCIETY.—A meeting of this society was held on Oct. 26th when the following cases were exhibited:—Dr. F. J. Smith: An elderly man with supposed Bulbar Paralysis. He was admitted with inability to swallow, paralysis of the tongue, aphonia, and loss of palate reflex. The small arteries were extremely hard.—Dr. R. Hutchison thought that in the absence of muscular atrophy of the tongue the lesion must be above the bulbar nuclei, possibly in the lenticular nucleus or the inferior frontal convolution.—Dr. F. J. Smith: A boy, aged sixteen years, with Gangrene of the Left Foot and Mitral Regurgitation. He had recently suffered from pneumonia.—Dr. Sequeira: A case of Raynaud's Disease. The nose, ears, and nails were affected, but there had been no hæmoglobinuria.—Dr. Chaplin: A man, aged forty-two years, with a Thoracic Aneurysm. There was marked laryngeal stridor and the right pulse was much weakened, though the signs of disease were chiefly on the left side.—Dr. F. J. Smith thought it might be due to atheroma of the aorta with dilatation and regurgitation.—Dr. A. T. Davies suggested that the sac had originated from the concavity of the aortic arch.—Dr. Sequeira: A child with supposed Cerebellar Tumour. He had a marked ataxic gait, double optic neuritis, and enlargement of the head.—Mr. Targett had seen a case with similar symptoms and diagnosed as cerebellar tumour which proved to be due to chronic hydrocephalus.—Dr. Kelson: Two cases of Congenital Syphilis.—Sir Hugh Beevor: Arthritis Deformans in an Elderly Man.

ROENTGEN SOCIETY.—The first annual meeting of this society was held on Nov. 1st at 11, Chandos-street, Cavendish-square, W. In the unavoidable absence of the President, Professor Silvanus Thompson, Mr. Thomas Moore took the chair. The report of the council was read and adopted. It showed a financial balance upon the year's proceedings of £46. Mr. C. W. Mansell Moullin was elected President for the coming year, 1898-1899. On taking the chair he gave a short address, in the course of which he insisted upon the need of a normal atlas of osteography and of collections of photographs illustrating special conditions. There were great possibilities for the future development of the new art in various technical directions. The annual conversazione will be held on Nov. 21st at the invitation of the new President. During the evening it was announced that a 10 in. coil had been presented to the society by Mr. Wilson Noble. The following is the list of officers:—President: Mr. C. W. Mansell Moullin. Past-President: Professor Silvanus Thompson. Vice-Presidents: Lord Blythswood, Professor Ferrier, Professor Gladstone, Dr. Macintyre, Mr. A. A. Campbell Swinton, and Dr Dawson Turner. Council: Mr. J. Mackenzie Davidson, Dr. F. E. Fenton, Mr. Greenhill, Dr. Hedley, Mr. Isenthal, Dr. F. H. Low, Mr. Wilson Noble, Mr. Sydney Rowland, Mr. Vezey, Mr. Snowden Ward, Mr. Webster, and Dr. Wolfenden. Hon. Treasurer: Mr. Thomas Moore. Hon. Secretary: Dr. Walsh, 5, Pump-court, Temple, E.C.

ILFORD MEDICAL SOCIETY.—At a general meeting of this society held on Nov. 3rd, the President, Mr. Best, in the chair, the subject of Affiliation with the Corporate and Medical Reform Association, Limited, was brought forward for re-consideration by means of a motion formally proposed by Dr. Griffith and seconded by Dr. Hanks, but unsupported, to rescind a resolution adopted on Oct. 6th to enter into affiliation. Whereupon the resolution of Oct. 6th, moved by Dr. Fraser, seconded by Mr. Houghton, was again put to the meeting and unanimously re-affirmed. At the previous meeting (Oct. 6th) a deputation was received

consisting of Mr. Murtaugh Houghton and Mr. R. B. Anderson submitting proposals of coöperation and affiliation in favour of corporate and medical reform, at which a resolution, moved from the chair and seconded by Dr. Duncan, approving of the policy and measures of the association, was carried *nem. con.*, and the resolution to enter into affiliation was, after a prolonged discussion, carried against three dissentients, who held that absent members should have a further opportunity of voting, for which purpose Dr. Griffith gave notice of his motion to rescind the resolution.—The Memorandum of Association was executed on Nov. 5th.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—This society held its third meeting on Nov. 4th, when Dr. Nicoll showed a case of Cerebellar Abscess successfully treated by operation.—Dr. Beatson then showed a Cystic Goitre removed by operation and also a large Fatty Tumour removed from the superior mediastinum. It lay beneath the deep cervical fascia and simulated a cyst protruding above the manubrium sterni.—Dr. James Adams and Dr. Nicoll each showed a specimen of large Meningo-encephalocele removed by operation, and Dr. Nicoll showed a Nævoid Tumour of the Intestine enclosed in a double intussusception involving over 5 ft. of bowel. It was successfully resected, having produced symptoms of acute intestinal obstruction.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The first meeting of the new session was held on Nov. 7th at 40, Leicester-square, W.—The President, Mr. John Fairbank, delivered his inaugural address. After thanking the members for the honour which they had conferred upon him he referred to the prominent part which the society had played in the foundation of the L.D.S. diploma, and at the same time incidentally referred to the opposition which had been offered to this step by the Society of Surgeons practising Dentistry. He dwelt at some length on the bearing which the various portions of the curriculum have upon the practice of dental surgery, pointing out that in his opinion the mechanical portion of the training outweighed in importance the medical and surgical. In reference to the actual education of students he thought that only too frequently the pupil while serving his apprenticeship was neglected by the practitioner and left to the tender mercies of the workroom assistant. He considered, too, that the utmost possible supervision should be given to the student whilst acquiring his operative knowledge and he suggested that every student before being examined should present satisfactory evidence that he had performed in detail all the various operations which he was likely to meet with in the practice of his profession. Referring to the treatment of patients he thought there was much to be learnt and he in the course of his practice had come to the conclusion that firmness of purpose combined with patience and gentleness were required for successful treatment. He touched, too, upon, in his opinion, the advantage of the subdivision of dental surgery into specialities, but he did not think there was any chance of his ideas in that respect being realised.—Mr. C. E. Smith presented a communication on the Value of Tube Teeth in the Manufacture of Bridge-work.—Mr. Storer Bennett read an interesting paper on Ankylosis of Human Teeth to the Jaw. He narrated the details of four separate cases of this character which had come under his notice and in all four there was unmistakeable microscopical evidence of the tooth substance having become firmly blended with the osseous tissue. The subject had, in his opinion, an important bearing on the operations of replantation and transplantation of teeth.—In a discussion which ensued several members of the society took part, and Mr. Bennett having briefly replied the meeting adjourned.

LIFEBOAT SATURDAY IN BRISTOL.—Oct. 29th was observed in Bristol as Lifeboat Saturday, and as a result nearly £300 was received for the funds of the society.

CAMBRIDGE UNIVERSITY.—At the election to the Council of the Senate held on Nov. 7th, the following were chosen to serve for four years: Heads of Colleges, Dr. Peile, Mr. Chawner; Professors, Dr. Forsyth, Mr. Ewing; Members of the Senate, Dr. Donald Macalister, Mr. R. T. Wright, Mr. F. Whitting. Mr. A. W. W. Dale. Dr. Macalister was at the head of the poll, and has already served for twelve years.

Reviews and Notices of Books.

A Treatise on Surgery by American Authors. Edited by ROSWELL PARK, A.M., M.D., Professor of the Principles and Practice of Surgery in the Medical Department of the University of Buffalo, &c. In Two Volumes. Vol. I.: General Surgery, with 356 Engravings and 21 full-page Plates, pp. 799. Vol. II.: Special or Regional Surgery, with 451 Engravings and 17 full-page Plates, pp. 804. 1897. Edinburgh and London: Young J. Pentland.

A TREATISE on surgery to which are attached such names as those of the well-known surgeons who have contributed to these volumes and which contains more than 1600 pages of text and more than 800 illustrations, is certainly deserving of the fullest and most careful consideration. This we have given to the work before us and we express the general impression which the perusal of the book has left on the mind when we say that it fully represents the high level of theory and practice which surgery has attained in the country from which it comes. The editor, Professor Park, has judiciously chosen for each section a surgeon well qualified to write on the subject, and though individual opinions occasionally show themselves, yet the general result is very homogeneous.

The whole of the section on General Surgical Pathology, which deals with inflammation and its results and the pathology of the blood, has been ably treated by the editor. He gives an interesting account of fat embolism, perhaps attributing to it more important results than are usually supposed to follow its occurrence. In describing the discharge from a "healthy granulating surface" Professor Park denies that it is pus, as its origin is essentially different, for he does not consider that it is due to the irritation of micro-organisms, but simply to excess of reparative material. This opinion, however, can hardly be maintained in view of the fact that an aseptic granulating surface under an aseptic non-irritating dressing has no discharge whatever.

A valuable chapter is that on Auto-infection, by the editor. It sums up our present knowledge of this recent but most important subject. In his account of Tetanus Professor Park mentions that the toy pistol with percussion-caps was in the United States a frequent cause of tetanus in children. For instance, in July, 1881, in Chicago, there were more than sixty deaths from tetanus among children who had been injured in this way. This led to the sale of these pistols being suppressed by law. Some excellent illustrations of actinomycosis are given in the section dealing with that disease, but in the treatment of actinomycosis no mention is made of the great value of potassium iodide.

Dr. John A. Fordyce of New York writes on Syphilis and Dr. W. T. Belfield of Chicago on Gonorrhœa; both of these chapters are decidedly good. The remaining surgical diseases are dealt with by the editor, who contributes a useful account of the surgical aspects and sequelæ of those diseases—such as the exanthemata—which usually come under the treatment of the physician. In speaking of the Etiology of Scurvy Professor Park mentions that he considers that beri-beri is largely due to absence of animal food. There is surely very little foundation for this opinion, and most of the evidence points strongly in favour of a bacterial origin of this disease. Minor Surgery and the Treatment of Hæmorrhage are well described by Dr. J. Parmenter of the University of Buffalo, and Dr. H. A. Hare of Philadelphia contributes the article on Anæsthesia. Dr. C. B. Nancrede of the University of Michigan is responsible for the chapters on Wounds and their Repair and their Treatment, and he gives a very good account of aseptic methods.

In the last section of the first volume dealing with Surgical

Affections of the Tissues the longest articles are those on Cysts and Tumours by the editor, and on Fractures and Dislocations by Dr. H. H. Mudd of St. Louis. Professor Park gives a very clear description of new growths, always a difficult subject for students, and many excellent illustrations from photographs of cases are to be found in this chapter. In the account of Villous Papillomata we are told that "they are strictly identical with chorionic villi"; although it is easy to see the writer's meaning, yet there is little doubt that the sentence quoted might readily be utterly misunderstood. Dr. Mudd's account of Fractures and Dislocations is very good, and we would only point out that "Lister's" long splint should be "Liston's." All the chapters in this section are excellent, but we would specially mention Dr. J. Ransohoff's article on the Diseases of Joints and their Treatment.

The second volume is devoted to Regional Surgery and is as satisfactory as the first; to it the editor has contributed a valuable account of the Surgical Diseases and Injuries of the Head. He limits the application of the phrase "concussion of the brain" to those cases in which no gross mechanical lesion is present and naturally finds that there are very few cases to which it becomes applicable. It is better on the whole to employ the expression as a useful clinical term for the group of symptoms present in cases after an injury to the head in which no signs of "compression" are present and yet the brain has suffered. The symptoms referred to are probably due to bruising of the brain with minute ecchymoses; in fact, the condition which the writer of this chapter has described under the title of "contusion" of the brain. In the description of compression it is mentioned that there is increased cerebral tension, the first effect of which is to drive some of the cerebro-spinal fluid out of the skull into the spinal canal, and, further, that there is a "less rapid flow of blood" through the brain, but it is not explained that as the intracranial pressure rises the amount of blood entering the skull diminishes until the anæmia of the brain resulting from this causes the coma which ensues. When the general intracranial pressure is equal, or nearly equal, to the arterial pressure in the internal carotid and vertebral arteries death must occur. The coloured plate illustrating the topographical anatomy of the cerebral cortex is very clear.

Dr. E. H. Bradford of Boston writes on the Surgery of the Spinal Column and Cord, a very good chapter, especially the part dealing with Pott's disease. Dr. Duncan Eve of Nashville contributes the section on the Heart and Blood-vessels, and Dr. D. B. Delavan deals with the Surgery of the Respiratory Organs; these chapters are well written. The Surgery of the Face and Neck is described by Dr. E. Souchon of New Orleans and is very satisfactory.

The name of Professor F. S. Dennis of New York is sufficient guarantee that the article on the Surgery of the Chest is all that it should be. Dr. A. D. Bevan's contribution on the Surgical Diseases of the Mouth, Tongue, Teeth, and Jaws is good but rather short. It is followed by an account of a new method of closing a cleft of the palate invented by Dr. Truman W. Brophy: it consists in using a modification of the quill suture, flat lead plates taking the place of the tubes. The important subject of the Surgery of the Abdomen occupies 70 pages and is written by Dr. Maurice H. Richardson of Boston with the assistance of Dr. Farrer Cobb. It must have been difficult to compress so large a subject into so small a space, but the result is satisfactory and up-to-date. Dr. Richardson also is responsible for the chapter on Hernia; it contains a reproduction of a photograph of that rare condition, an ischiatic hernia. Dr. C. B. Kelsey of New York gives a good account of the Surgery of the Rectum and Sigmoid Flexure; for hæmorrhoids he prefers Smith's clamp and cautery to all other methods, and he thinks that "so elaborate an operation" as Whitehead's is never necessary to cure any case of hæmorrhoids. He considers that the ordinary "syphilitic stricture" of the rectum is not really syphilitic, but the result of simple proctitis. Dr. W. T. Belfield of Chicago has written the chapter on Genito-Urinary Surgery and has given a very good description of this important branch of surgery in comparatively few pages. In describing the treatment of Hypertrophy of the Prostate the writer speaks well of double castration, but insists that it should never be performed until the bladder has been opened and explored by the finger, so that the operator may be certain that the symptoms are not due to a vesical calculus or tumour.

The section on the Surgery of the Female Reproductive Organs has been undertaken by Dr. James H. Etheridge of Chicago; he gives a somewhat brief account of Gynæcological Surgery. It should have been pointed out in the description of ovarian cysts that most of the unilocular cysts are derived from the parovarium and not from the ovary itself. The account of the various procedures for treating ruptured perineum is very complete, and a diagram shows well the incisions in the different methods by means of superimposed outlines.

Dr. Charles B. Parker of Cleveland, Ohio, deals with the Surgical Diseases and Injuries of the Breast. This article is illustrated by some excellent photographs. Professor Rudolph Matas of New Orleans describes Amputations, and all recent methods are included. In the history of the methods of amputation it is hardly correct to speak of Celsus as the "prince of Greek physicians," as, though we know comparatively little about him, he certainly wrote in Latin and lived in Italy. For amputation at the hip-joint the writer prefers Wyeth's method, in which the hæmorrhage is controlled by a rubber tourniquet held in place by two long steel pins which transfix the thigh close to the hip. In the statistics of amputations which are given no distinction is made between amputations for injury or for disease, or between primary and secondary amputations. As on these points depends the whole value of statistics in this subject no conclusions can be drawn from those quoted.

Orthopædic Surgery has a section to itself, contributed by Dr. R. W. Lovett of Boston. The account is rather compressed, but may be taken as fairly representative of modern practice.

The most striking portion of Dr. Arpad G. Gerster's article on Plastic Surgery is the series of diagrams illustrative of the methods by which defects of the skin can be made good; the whole chapter is satisfactory.

Dr. C. S. Bull of New York contributes the section on the Surgery of the Eye, but he mentions in a preface that only the more common conditions and those which are likely to be met with in general practice are described, and comparatively little notice has been taken of operative technique except in regard to operations on the eyelids, as all operations on the eyeball are better left to the care of the ophthalmic surgeon. Even with these limitations the article occupies nearly 50 pages and is as complete as is needed in a work on general surgery.

In Dr. Clarence J. Blake's contribution on the Surgery of the Ear a useful summary is given of the chief operations on the middle ear. The volume concludes with a chapter by the editor on the Application of the Roentgen Rays to Surgery. Each volume has its own index and a general index is given in the second volume. The several articles vary greatly as to the number of references given, but many of them are abundantly supplied with these useful aids to study. As we have mentioned already nearly 800 illustrations adorn the pages. The printing and general get-up of the work are excellent.

The Principles and Practice of Medicine. By WILLIAM OSLER, M.D., LL.D. Edin., F.R.S., F.R.C.P. Lond., Professor of Medicine in the Johns Hopkins University and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore. Third Edition. Edinburgh and London: Young J. Pentland. 1898. Pp. 1181.

THIS work is already so well known that no recapitulation of its scope is necessary in a review. But the present rate of progress of medical science necessitates frequent revision of text-books, and for the purpose of coping with these advances the present edition has been wholly recast—notably is this the case in the classification of diseases. Many readers, no doubt, will be surprised to find pneumonia and rheumatic fever placed amongst the "specific infectious diseases." With this classification we agree so far as concerns the former. Pneumonia is defined as "an infectious disease characterised by inflammation of the lungs, toxæmia of varying intensity, and a fever that terminates abruptly by crisis. Secondary infective processes are common." Dr. Osler is known for the great originality of his writings and for having the courage of his convictions. He is by no means the first observer to suggest that pneumonia should be classed amongst the specific fevers; but, as far as we are aware, he is the first who has so classified the disease in a text-book of general medicine. The section on Etiology, which supports this contention, is couched in terse phraseology, but contains all that is necessary for the student and practitioner and is devoid of redundant arguments. Dr. Osler goes still further in writing on Broncho-pneumonia, a disease generally considered as a purely inflammatory one, for we find the following: "All forms of broncho-pneumonia depend upon invasion of the lung with microbes and it would have been more consistent to place them with lobar pneumonia among the infectious disorders, but it is well, perhaps, to defer this until the bacteriology of the different varieties has been more fully worked out."

"Rheumatic fever" is defined as "an acute, non-contagious fever dependent upon an unknown infective agent and characterised by multiple arthritis and a marked tendency to inflammation of the fibrous tissues." The arguments in favour of this definition are likewise very lucidly given, and are based (*a*) on general evidence, such as its epidemic and seasonal occurrence; (*b*) on its clinical features, such as their similarity to those of septic infection; and (*c*) on special evidence, especially the bacteriology of acute rheumatism; but on this point the evidence is conflicting, and no positive proof has yet been offered of the constant association of any special micro-organism with the disease, and we would prefer to wait for further testimony before countenancing so bold a departure in medical classification.

Much new matter has been incorporated in the section on typhoid fever, and we note particularly the grouping of the various types. "Typhoid fever," says Dr. Osler, "is no more primarily intestinal than is small-pox primarily a cutaneous disease. We may recognise the following groups: 1. Ordinary typhoid fever with morbid enteric lesions. An immense majority of all the cases are of this character. ..... 2. Typhoid septicæmia, a general infection with the bacilli without special local manifestations ..... the diagnosis may rest upon the existence of the Widal reaction and the demonstration of the bacilli ..... 3. Typhoid fever with localisations other than enteric ..... The organs attacked may be the lungs, the spleen, the kidneys, or the cerebro-spinal meninges ..... 4. Mixed infections." All observers who have had a large experience of typhoid cases will probably agree with the author in this classification.

We commend Dr. Osler's remarks on the Value of Vaccination to the careful consideration of those whose opinion on the subject may be undetermined. Equally interesting are his comments on the Communicability of Leprosy. This matter is receiving much attention at the present time, a committee having just been appointed by the Royal College of Physicians of London to inquire into the evidence which has been accumulated. Dr. Osler remarks that while it is highly probable that leprosy may be contracted by accidental inoculation the experimental evidence is as yet inconclusive.

Much new matter will be found in the sections on Diseases of the Blood and Heart, and in these and similar sections on the Lungs and Kidneys the student will find set forth in decisive terms everything that is necessary for examination purposes. The paragraphs devoted to Treatment are especially noteworthy. The student or practitioner is not confronted with a number of drugs which have been suggested in certain diseases, but only those are recomended which have stood the test of experience. The section on Diseases of the Nervous System has been rearranged and an attempt has been made to group the diseases in accordance with the modern conception of the anatomy and functions of the part. Thus, system diseases—sensory, motor, and the two combined—are first considered, then diffuse diseases of the nervous system, such as affections of the meninges. Next diffuse and focal diseases of the spinal cord, followed by similar affections of the brain. Then we find diseases of the peripheral nerves, general and functional diseases, and, finally, vaso-motor and trophic disorders. In conclusion, we can cordially recommend Dr. Osler's text-book as one of the best in the English language. It is a volume which is much required, containing all that is necessary with regard to theory, but at the same time being essentially practical.

The Mineral Waters and Health Resorts of Europe. By HERMANN WEBER, M.D. Bonn, F.R.C.P. Lond., and F. PARKES WEBER, M.D. Cantab., F.R.C.P. Lond. London: Smith, Elder, and Co. 1898.

THIS is a new and enlarged edition of "The Spas and Mineral Waters of Europe," which was published not long ago. The additions made in the present volume include two new chapters on "Inland Climatic Health Resorts" and "Grape Cures, Milk-and-Whey Cures, Sanatoria for Dietetic and Special Methods of Treatment, and Sanatoria for Phthisis" respectively. In the arrangement of the spas of any one group the plan followed is to select two or three typical examples of the group and then to consider the remaining members of the group more briefly in "political geographical" order. Thus Wildbad and Ragatz represent the simple thermal waters, Spa, Schwalbach, and St. Moritz the chalybeate waters, and Ems and Royat the muriated alkaline waters, and so on. The information given is fairly full, considering the limits of the work, and extremely accurate. We have not been able to detect any error of importance. The estimate given of the value of balneological and climatic treatment is eminently sober and judicious, all extremes being avoided and every variety of treatment receiving due consideration. In dealing with such controverted questions as the Nauheim treatment of heart disease, the Karlsbad treatment of diabetes, and the Aix-la-Chapelle methods in syphilis, the authors show admirable judgment and good sense. The long chapter upon "Different Diseases and Morbid Conditions with respect to the Selection of Mineral Waters, Climates, Exercises, &c.," is an excellent piece of writing and contains a vast amount of well-digested information and valuable advice. If we have any fault to find with the general scheme of the work it is that spas and mineral waters receive disproportionate attention, while only relatively meagre space is allotted to such resorts as Davos, Falkenstein, Nordrach, &c. No doubt considerations of space have had great weight with the authors, but in future editions we think the special sanatoria for pulmonary tuberculosis might fairly claim fuller consideration. In a work which is on the whole a model of

accuracy even trifling errors naturally strike the eye. Thus, Roncegno and Levico are described in one part of the work as being "in the Austrian Tyrol" and in another part as being "in Italy." Contrexéville is described as distant "thirteen hours by train from Paris." These, however, are trifles. In the account of special marine sanatoria for "scrofulous" children no mention is made of Italy. We can warmly commend the book to the practitioner who desires a trustworthy and compendious guide to the large subject of mineral waters and climatic treatment but who does not want an exhaustive discussion of these questions. Within its limits this work has no rival that we know of. A therapeutic index would be of service and might be added in the next edition.

LIBRARY TABLE.

The Day's Work. By RUDYARD KIPLING. London: Macmillan and Co. 1898. Price 6*s*.—It is not usual with us to review a work of fiction other than one written by a medical man, but Mr. Kipling's latest collection of stories deserves more than a passing notice from us on account of two of them—namely, "The Bridge-builders" and "The Tomb of His Ancestors." The first details the building of a railway bridge over the Ganges and how when it was all but finished the great river arose in her might, coming down in flood to destroy the result of all the toil and labour. Then we hear how the engineer and the foreman of the works, who was a native, sat and watched to see what would happen. Neither could eat and so the native gave his superior officer some opium. "Findlayson stood with his chin on his chest thinking. There was one point ..... that he had not fully settled in his mind. The figures would not shape themselves to the eye except one by one and at enormous intervals of time. There was a sound rich and mellow in his ears like the deepest sound of a double-bass—an entrancing sound upon which he pondered for several hours as it seemed." After this he found himself in a boat and considered how easy it would be to step out on the water and so be borne by the rushing stream to the shore. But "It needed only an exertion of will for the soul to hurl the body ashore as wind drives paper; to waft it kite fashion to the bank. Thereafter ..... suppose the high wind got under the freed body? Would it tower up like a kite and pitch headlong on the far-away sands or would it duck about beyond control to all eternity? Findlayson gripped the gunnel ..... for it seemed that he was on the edge of taking flight before he had settled all his plans..... In his mind he had already escaped from the boat and was circling high in air to find a rest for the sole of his foot. His body—he was really sorry for its gross helplessness—lay in the stern." He then argued with himself that he was on shore, but that Findlayson, "poor beast," would be drowned. "I'm on shore already, why doesn't it come along?" Now, anybody can realise the opium enthusiasm, but what strikes us in these passages is the wonderful way in which Mr. Kipling has put the sensations down on paper. This is the faculty in which he is so pre-eminent—the ability to realise for others circumstances and scenery. To take an instance of a slightly different character, anyone who has ever been in an Oriental mountain country has only to read the description of the hill village in the "Miracle of Purun Bhagat" to have it all brought back—the sights, the sounds, the very smells are present as we read. In "The Tomb of His Ancestors" we find an account of a mode of procedure which it would be eminently satisfactory to see applied to conscientious objectors. The fiat had gone forth that a certain tribe were to be vaccinated, and the members thereof, being simple and ignorant, tied up the official vaccinator in bonds and destroyed the official calf. John Chinn, the descendant of the "ancestors," is the *Deus ex machinâ*. He was trusted by the tribesmen and he addressed them as follows: "Ye know the small-pox who pits and scars your children so that they look like wasp combs. It is an order of the Government that whoso is scratched on the arm with these little knives which I hold up is charmed against her. All sahibs are thus charmed and very many Hindoos. This is the mark of the charm. Look!" "He rolled back his sleeve ..... and showed the white scars of the vaccination mark. 'Now, all these things the man whom ye bound told you. But being pigs ye did not believe, and so came I here to save you first from small-pox, next from a great folly of fear, and lastly, it may be, from the rope and the jail!'" These sound arguments had their effect and the whole tribe submitted. The two stories from which we have quoted are by far the best of the collection, although "William the Conqueror" and "Maltese Cat" come very near them. The Indian or Afghan *milieu* is the one to show Mr. Kipling at his best.

The Transactions of the Society of Anæsthetists. Vol. I. London: Published for the Society by the Medical Publishing Company, Limited. 1898. Pp. 171. Price 5*s*.—Some five years ago the anæsthetists of London formed themselves into a society for the purpose of encouraging the study of the subjects connected with their professional labours. The volume before us is the first one which the society has issued. It contains the Transactions for the year 1897-98, with the exception of the opening address delivered by the President, which appeared in THE LANCET of Nov. 27th, 1897. No collected records of the society's transactions have appeared until the present. Of the five sections of the book some deal with practical matters and we find that most of the newer methods and apparatus are described, notably those recently introduced with the view of maintaining anæsthesia by giving nitrous oxide gas through the nose. It has been said that the skilled anæsthetist should be an educated physician, a ready surgeon, and a physiologist rolled into one. In this book we find evidence that the society attempts at least to give its members an opportunity of hearing the views of physiologists as well as physicians and surgeons upon the subject of chloroform and ether. Professor Waller's now well-known experiments on the effects produced on isolated nerve by the anæsthetic vapours are recorded, and Professor Schäfer's views upon the physiological antidotes to chloroform are given. In the course of a most interesting discussion upon the best methods of Resuscitation in Emergencies under Anæsthetics excellent speeches were made — Dr. Bowles dealing with the different modes of performing artificial respiration, Dr. Silk with the antidotal employment of strychnine, and Mr. Harold Barnard with that of hydrocyanic acid and the effects of posture whereby the loss of the check action of the splanchnic areas is compensated and bulbar anæmia avoided. Not the least useful parts of these Transactions are those which deal with cases of danger, death, or difficulty, which occurred in the practice of members of the society and which were brought forward for discussion and elucidation. The volume is clearly printed, has illustrations, and forms a compendium of modern work in anæsthetics which no one interested in the subject can well afford to be without. We congratulate the society upon its first literary venture and hope to see equally good material in succeeding volumes with the addition of an index to facilitate reference.

Aerztliche Versicherungs-Diagnostik der Vollwertigen und der Minderwertigen Leben (*Life Assurance: The Medical Diagnosis of Good and Doubtful Lives*). By Dr. EDWARD BUCHHEIM.—The publishing firm of Herr Alfred Hölder at

Vienna has recently issued the above work by Dr. Edward Buchheim. The author, who is the Principal Physician of the Allgemeiner Beamten-Verein at Vienna, is well known in Austria and Germany as an authority on the subject of life insurance from a medical point of view, and his present book is a timely expansion of his publication some ten years ago on the same subject.

JOURNALS AND REVIEWS.

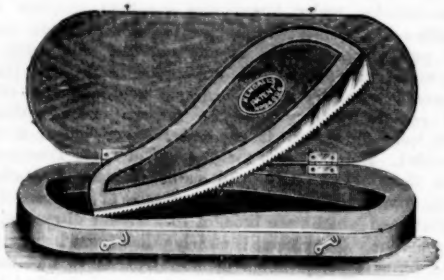
The Phonographic Record for November contains, in addition to notes of a fatal case of laparotomy for perforated gastric ulcer, an article by Dr. E. B. Gray upon the New Edition of Phonographic Outlines of Medical Terms, reviewed in THE LANCET of Oct. 15th, and a discussion upon Chronic Disease of the Uterine Appendages, taken from the pages of one of the circulating manuscript magazines of the Society of Medical Phonographers. Rest, hot vaginal douches, glycerine plugs and saline aperients, the treatment of uterine abnormality, and administration of hydrastis canadensis, salix nigra, hamamelis, ergot, and bromides sum up the measures adopted. Removal of the appendages is mentioned in deprecatory terms.

The Practitioner.—The November number of this journal is a very interesting one. Among the editorial paragraphs of the month is a sensible one on that ridiculously misnamed form of lunacy known as Christian Science. The editor rightly says that although the practitioners of this form of therapeusis are not amenable to the law for their "purely mental therapeusis" yet that if they prevent medical treatment they may then be fairly held responsible. Among the original papers are a clinical lecture by Dr. Patrick Manson on the Parasite of Malaria and a paper by Dr. Page May on Sulphur Treatment during the Winter in Egypt, dealing mainly with the springs at Helouan. The Medico-Literary Causerie deals with the late Wilhelm Meyer.

New Inventions.

SAW FOR REMOVING PLASTER-OF-PARIS AND OTHER CASINGS.

MR. E. G. KENDALL, of 53, High-street, Harborne, Birmingham, sends us a specimen of a saw which he has recently constructed for the removal of plaster-of-Paris and other casings. The saw has been made to obviate the use of



pliers, knives, acids, and other ill-adapted weapons, the shape of the blade being so designed that the toothed edge of the saw will enable the operator to cut through casings of any thickness without injuring the flesh of the patient.

A NEW MEDICINE BOTTLE.

MR. S. THISTLETHWAITE, of 35, Market-street, Manchester, sends to us for inspection an eight-ounce bottle and a one-drachm vial, the feature of which is that their necks are of the same size and therefore require the same sized cork. The invention has for its objects the saving of time, expense, and annoyance to medical men and druggists when dispensing and consequently merits respect from us, but we are not certain that the convenience of the innovation is quite as obvious to everyone as it may be to the dispenser. We have tried the effect of pouring water from the eight-ounce specimen and found the narrow neck a decided obstacle to an even flow. The fluid had a tendency to come in squirts which might make the measuring of an accurate dose a rather difficult task to the nurse, patient, or patient's friends. This being so with an eight-ounce bottle we wonder what sort of flow would issue from a forty-ounce bottle, up to which size the inventor is making bottles with a uniform neck. There is not much demand in medicine for bottles containing as much as two pints, but when they are wanted they are generally intended to hold lotions or antiseptic solutions to be used freely. We fear that a bottle whose speciality is to deliver *guttatim* a fluid that is wanted in large quantities will never achieve a vogue among medical men or nurses, however easy it may be for a dispenser to find a cork for it.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH AND THE ARMY MEDICAL SERVICE.

THE following memorial has been presented to Lord Lansdowne by the Royal College of Surgeons of Edinburgh:—

To the Right Honourable the Marquess of Lansdowne, K.G., Her Majesty's Secretary of State for War.

The Royal College of Surgeons of Edinburgh wishing to encourage its Licentiates to regard the Army Medical Service more favourably than they have done in recent years has had under consideration the regulations for admission to the service, and after discussion at a meeting of the Fellows of the College has committed to us, its President and Council, the duty of respectfully bringing under your lordship's notice its opinion in regard to certain changes which it deems necessary. The College gratefully appreciates the interest your lordship has shown in the well-being of the Army Medical Service, and, along with your lordship, recognises the importance to the efficiency of the army of having a medical department highly educated, fully manned and equipped by the best men sent out from our colleges and universities. With the view of obtaining such a class of candidates for the Army Medical Department we beg most respectively to submit:—

FIRST. *In regard to the conditions for admission to the service.*—The present regulations for the competitive entrance examination do not appear to us well adapted to secure the best men; too much importance seems to be given to elementary subjects and too little to the practical and clinical work which now occupy the latter years of professional study. Since Jan. 1st, 1892, by order of the General Medical Council, the course of professional education has been extended in all cases to five years, with the recommendation that the fifth year, thus added, should be devoted to clinical work. By the regulations of the various universities and other licensing bodies the examinations in elementary subjects, including chemistry, pharmacy, anatomy, and physiology, take place at the end of the first, second, or third year of study, thus allowing the fourth and fifth years to be devoted to the branches of surgery and medicine and midwifery, and to clinical work in hospitals and dispensaries.

Intending candidates for the army competitive examination who have qualified themselves for the active duties of their profession are thus deterred from entering the competition, which either necessitates a return to elementary studies or a recourse to a "crammer" in order to acquire such kind of knowledge as will gain marks at the competitive examination. By this system the best men will not be obtained for the service. While we hold that a thorough knowledge of the fundamental subjects of anatomy and physiology is essential, it must be remembered that all candidates have already been tested in these subjects in a more practical manner than that employed at the army

competitive examination or than can be secured apart from dissecting rooms and college museums and laboratories. We would also observe that abundant opportunities occur in the course of any examination in surgery and medicine for testing the practical knowledge of anatomy and physiology. We would therefore venture to suggest that "chemistry and pharmacy and a practical knowledge of drugs" and "anatomy and physiology" be no longer retained as *separate* subjects in the army competitive examination.

The subject of pathology, including bacteriology, has of late years become of great importance in surgical and medical study, as well as in that of hygiene, and might be made useful as a critical test of the acquirements of candidates. The importance of such knowledge and of the accompanying familiarity with the use of the microscope to the army medical officer is manifest. Of this there have recently been presented notable examples in the recognition of the causes of typhoid fever, cholera, and bubonic plague, &c., and in their prevention and treatment. It is disappointing and deterring to our best qualified men, who have devoted the latter part of their course to such studies in their clinical work, to find them not recognised in the army competitive examination.

We do not forget that the army surgeon on probation has to undergo a course of further instruction in such subjects at the Army Medical School which cannot but be useful to him in the special application of such knowledge to the circumstances of military duty, but we submit that the previous more general study of these subjects should be recognised in the army competitive examination. We are therefore of opinion that the compulsory part of the competitive examination should be limited to those subjects with which the student is mainly concerned in his last two years of study—viz., surgery and medicine—surgery to include operations on the dead body and the application of surgical apparatus; medicine and surgery to include pathology and hygiene and the examination at the bedside of patients, medical and surgical. We would further suggest that the number of marks obtainable in the practical subjects of surgery and medicine should be increased in proportion to those obtainable in the voluntary subjects of science and languages. We desire to mention our cordial approval of the intimation to candidates for admission into the Army Medical Service that they may be rejected for bad spelling or composition. Among the large number of preliminary examinations in general education recognised by the General Medical Council there is reason to believe that sufficient values are not always given to examination in English. It is not necessary to dwell on the injurious influence that such deficiencies in preliminary education must have on the social position of an army medical officer.

SECOND. *The non-existence of a system of "Study Leave."*—In the Army Medical Service this is a serious impediment to the efforts of the ordinary medical officer to keep abreast of the progress of medical science. Unless he happen to be stationed where there is a medical school it is not possible for him to become practically familiar with the improvements in the ever-advancing science and art of surgery and medicine. Such opportunities are ever present at all medical schools, but, in addition, there are now at all the important medical schools courses of instruction, termed "Post-graduate Courses," to which practitioners in civil practice have recourse in order to learn what is new in surgery and medicine. Still more are such opportunities required for most of the medical officers of the army, cut off as they necessarily are for long periods from being in relation with medical educational centres. Such opportunities can rarely be attainable during foreign service, but on returning from such service, as well as after some years of ordinary home service, we regard it as essential that the army medical officer should have a period of leave afforded him for practical study, and that some advantages be accorded him in recognition of such further study, which may act as a stimulus to him to avail himself of it. We would also venture to remind your lordship that the promise made by a previous Secretary of State for War that the Examining Board for the Army Medical Department should include representatives from the medical schools of Scotland and Ireland, as well as from those of London, has not been implemented to the extent we desire.

We beg most respectfully to submit to your lordship our opinion that if improvements on the lines indicated were introduced the army medical service would be better fitted to attract young medical men of talent and to attain to that state of high efficiency which it is alike the duty and interest of the country to secure.

On behalf of the President and Council of the College,
(Signed) JOHN CHIENE, President.

Royal College of Surgeons of Edinburgh, July 11th, 1898.

The following reply has been received from the War Office:—

To Professor John Chiene, President of the Royal College of Surgeons of Edinburgh.

SIR,—With reference to your letter of 13th July last, forwarding a memorial from the Royal College of Surgeons of Edinburgh in regard to the medical service of the army, I am directed by the Secretary of State for War to inform you that he has given his most careful attention to the representations therein set forth. In regard to the question dealt with in the first part of the memorial—viz., that of the subjects to be included in the competitive examination for entrance into the Royal Army Medical Corps—Lord Lansdowne admits that the arguments adduced are not without force, but he has come to the conclusion that it is not at the present moment advisable to make any change in the subjects prescribed for the examination. With the opinions expressed in the second part of the memorial, as to the desirability of a system of "study-leave," Lord Lansdowne fully sympathises, and he has already given his sanction to the grant of leave for this purpose; but owing to the unusually severe demands which have been made upon the *personnel* of the Royal Army Medical Corps at a time when it was considerably below its normal establishment it has not been found possible to give effect to this privilege to the extent to which he would desire to do so. It is hoped, however, that the grant of such leave on a more liberal scale may shortly become practicable. With reference to the last paragraph but one of the memorial, in which it is stated that the promise made by a previous Secretary of State for War, "that the Examining Board for the Army Medical Department should include representatives from the medical schools of Scotland and Ireland, as well as from those of London," has not been adequately fulfilled, I am to call the attention of your College to the composition of the present Board of Examiners, two of whom (out of a total of four)—Professor McCall Anderson, Scotland, and Professor Cunningham, Ireland—belong to the schools of those countries, and to state that such a composition, in the opinion of Lord Lansdowne, constitutes an adequate fulfilment of the promise referred to. I am to add that every attempt will be made to secure upon all occasions a fair representation of the different schools, but the eminence of the examiners and the public confidence which they inspire must be the first consideration.

I have the honour to be, Sir, your obedient servant,
(Signed) R. H. KNOX.

War Office, London, S.W., October 7th, 1898.

QUEEN'S COLLEGE, BELFAST.—The following is the scholarship list which was posted in the College Hall on Nov. 1st for session 1898-99 in the Faculty of Medicine: Fifth Year—Medicine and Pathology: William Matthew Hunter; Surgery and Midwifery: John Edmund Clements, Fourth Year: John Alexander Douglas Radcliffe; John Campbell Rankin; John Elder M'Ilwaine, a prize. Third Year—Albert Lytle Black; David M'Mordie. Second Year—Henry Mulrea Johnston; Thomas Carnwath; John M'Clatchey, a prize. First Year—Literary—John Stanley Pyper.

TAUNTON AND SOMERSET HOSPITAL.—On Nov. 2nd Lord Wolseley unveiled at Taunton a bronze bust of the late Lieutenant-Colonel Chard, V.C., erected with funds subscribed to perpetuate the memory of the hero of Rorke's Drift. Lord Wolseley afterwards presented a cheque for £600, being the balance of the fund, to General Emerson, who represented the Taunton and Somerset Hospital, and this sum is to be used for the purpose of endowing a bed in the hospital for a soldier or his wife or child. Colonel Heyar, the honorary secretary of the fund, mentioned that £300 was still required to complete the endowment of the bed, and added that he had reason to believe the people of Natal would shortly send a donation for that purpose.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 12, 1898.

ON Thursday, Nov. 17th, will be held the annual meeting of the Fellows and Members of the Royal College of Surgeons of England. The progress of reform in the College is, as it has ever been, extremely slow, and we can well understand that some of its supporters despair of it entirely. Fourteen years have now elapsed since the Council decided to call a yearly meeting of the Fellows and Members of the College and to submit to them the annual report. This was a very small concession for the Council to make, but it was obtained only after a long and severe struggle, and at first the meetings were of little value, for nothing more than limited discussion was allowed. In time, however, resolutions were permitted, but only under oppressive restrictions which deprived them of much of their value. To-day a little more freedom has been granted both as to the terms of the motions brought forward at the meetings and as to the limits of the subsequent discussions. Something more than five years ago the Council, after many misgivings and much consultation with its legal advisers, decided to call half-yearly meetings of the Fellows apart from the Members, and further to call separate meetings of the Members, whenever in the opinion of the Council it was advisable. The introduction of voting by post for the election of members of the Council is also to be accounted a measure of reform. But these changes, few and comparatively unimportant though they be, represent the total amount of reform which has been wrung from a reluctant Council in the fifty-six years which have passed since the establishment of the Fellowship. That act cannot be looked upon as in any way a true reform. Though the benefits resulting from the formation of a higher grade of surgeons have been great, and it has doubtlessly led to the improvement and advancement of the science and art of surgery, yet the political outcome of the creation of the Fellowship has been in effect the restriction of the franchise to a comparatively small body of men, and politically it was a retrograde step. Far be it from us to belittle the standing or intelligence of the Fellows — they have by their training and their experience a wide and accurate knowledge of many parts of professional education; but neither the training nor the experience of the greater number of the Fellows renders them capable of judging of the professional needs of the majority of the Members of the College. Even were it not so; if the Fellows and the Council elected by them were indeed fitted to appreciate the requirements of the Members, if every act and every resolution of the Council were all that could possibly be devised for the benefit of the Members, even then the anomaly and inadequacy of the present constitution of the College would remain conspicuous. By the express words of the Charter, by the very admission of the Council itself, the Members form part of the body corporate, and yet in vain do they appeal for a share in the government of the College. Those who are the true constituents have no voice, either direct or indirect, in the management of the institution to which they belong.

Early in last year the Council solemnly put forth their claim to represent the whole of the body corporate of the College, and therefore the Members as well as the Fellows, but it is difficult to believe that this pronouncement deceived even any member of the Council who voted for it at the meeting at which it was carried. There are fewer than 1200 Fellows; there are more than 17,000 Members of the College of Surgeons: can it be seriously said that those 1200 Fellows represent the Members, who are fourteen times as numerous? The Council has admitted that the Members are a part of the body corporate of the College, and no satisfactory reason has ever been advanced why they should not take part in the election of the Council. We disclaim entirely and emphatically any imputation of unfairness against the individual members of the Council—they are all, whatever opinions they may hold, desirous only of doing what they think best for the interests of the College—and, moreover, we are of opinion that no small proportion of the members of the Council really favour the extension of the franchise. We simply point out their unsatisfactory position. It is often urged that the Members have no *legal* right to the powers they claim, and this must be admitted, but they possess what is of more value than a legal right, they have a moral right, and when legal and moral rights come into conflict the final victory always remains with the moral right. Moreover, the Members of the College contribute the major part of its revenues, and but for their pecuniary contributions the College would soon have to curtail its huge annual expenditure on the museum and library. An argument which is also employed is that since every Fellow of the College is also a Member, therefore some Members at least are represented on the Council. We only mention this in order to show how logically weak the defenders of the present state must be to be willing to employ such a puerile argument. Again, it has been said that the privilege of voting at the election of members of Council has acted as a great inducement to many to pass the examinations for the Fellowship. We think we may safely challenge the upholders of the present system to produce any Fellow of the College who was influenced in even the slightest degree by the privilege of voting to aspire to the Fellowship.

For the present we may leave out of consideration the question as to how the Members should be represented on the Council, whether by Fellows or by Members, or by Fellows or Members indifferently. These are weighty matters and in due time they will come up for discussion and ultimately for solution, but at present they may stand aside and await their turn. The exact number, too, of representatives on the Council to be allotted to the Members and whether they should be in place of a corresponding number of the present members of Council or in addition to the twenty-four representatives elected by the Fellows, though questions of great importance, can well wait until the right of representation has been conceded. *The Members must have the power of voting at the*

election of the Council. This desired consummation, however, cannot be obtained without persistence on the part of those who are interested in the matter. There is unfortunately a great deal of apathy amongst the Members; they do not seem to feel that the subject concerns them at all; many are too busy with their practices, many others live too far away for active coöperation, but even after allowing for all who are absent on account of these reasons there are very many who never put foot within the College buildings. Time after time at the annual meetings of Fellows and Members only a few are present, and of these some are Fellows. The Members must bestir themselves; they must attend in full numbers at the meetings which are at present vouchsafed to them; they must show by their votes that they are thoroughly in earnest and that they intend to demand the suffrage persistently until it is granted to them; but withal this must be done with courtesy. Vulgar declamation and the attribution of unworthy motives to the members of the Council can only tend to estrange the sympathy of many Fellows and members of the Council who now are fully on the side of the Members. In time the looked-for end will come. No one can prophesy when, but come it must if the Members, who so truly deserve the power of voting for the election of the Council, show by their actions and their words that they desire it also. The Royal College of Surgeons of England cannot suffer. Firmly supported by all its Members as well as all its Fellows, it will fulfil more thoroughly than at present the purpose of its existence.

IT is a curious fact, the truth of which is so generally recognised that it almost amounts to a platitude, that disastrous occurrences which take place in our midst at once rivet our attention, whereas if they take place at a distance they fail in a great measure to do so. The explanation of this is not far to seek, for if a disaster occurs at a distance more or less remote from ourselves it does not endanger our lives or jeopardise our interests. Moreover, any evil which is at all chronic or continuous soon loses the effect which its first incidence produced. Be all this as it may, however, the recent history of India has been singularly calamitous, for famine, plague, pestilence, and war have followed one another in quick succession. When the news of the outbreak of plague first reached this country some three years ago, and whilst the number of cases was still comparatively limited, we could not shut our eyes to the gravity of the intelligence, although we were naturally desirous of avoiding the creation of any feeling of panic in the initial stage of an evil, when the extent of it in the future could only be a matter of conjecture and hypothesis. The subsequent progress of events has shown how serious has been the continuance and spread of the epidemic of plague in the Bombay Presidency and elsewhere in India. The Government of that country finds itself in the extremely difficult position of being placed between the opposing forces of sanitation and political expediency. Attempts to suppress or limit the spread of the disease by restrictive measures—necessarily of a severe character if they were to be of any use—have not unnaturally awakened a spirit of antagonism on the part of the native population and given rise to a good deal of disaffection.

Moreover, our knowledge of plague at the beginning of the epidemic was small and empirical, mainly derived as it was from the historical records of it in the past rather than from any scientific, clinical, or practical observation. The subject has, however, now been studied with the keenest interest from all sides and has been investigated with all the aids which the more recent and precise methods of scientific research could bring to bear upon it. Nor has the investigation comprised only clinical, bacteriological, and experimental work in the laboratory. The most important step was the first one—that of the discovery of the bacillus pestis by Dr. KITASATO and Professor AOYAMA of Japan during the preceding epidemic of plague at Hong-Kong. The accuracy of their discovery has been completely verified by the late lamentable occurrences at Vienna. So far as that part of the investigation of plague is concerned we have complete proof, at any rate, that the bacillus of plague is veritably and indeed the cause of that disease and that it is capable of initiating an outbreak of plague of virulent type. While we can then take a firm stand upon this foothold of fact there still remains a great deal to be yet accomplished, some of which is of a very practical and important kind. We are still upon the threshold of the inquiry as to the natural history of the bacillus, the conditions favourable to its growth and development, and as to the best means of dealing with plague with a view to preventing or limiting its spread and of safeguarding a population or individuals against its attacks. We think, therefore, that the Government have very wisely decided to send a Commission to India, consisting mainly of scientific experts, to report upon the plague in that country, and that an excellent selection has been made for the purpose. Dr. THOMAS R. FRASER, F.R.S., Professor of Materia Medica and Clinical Medicine at Edinburgh University, has accepted the duty of President and with him will be associated two other scientific experts — Dr. WRIGHT, Professor of Pathology at the Army Medical School, Netley, and Dr. RUFFER, who has been for some time head of the Egyptian Sanitary Department at Cairo. Two officers of the Indian Civil Service, Mr. J. P. HEWETT, C.I.E., and Mr. A. CUMINE, both of whom have had much to do with recent plague affairs in India, have also been appointed to the Commission by the Government of India. The scope of the Commissioners' inquiries will include—(1) the origin of the different outbreaks of plague; (2) the manner in which the disease is communicated; and (3) the effects of certain prophylactic and curative serums that have been tried or recommended for the disease. The members of the Commission will reach Bombay towards the end of the present month.

It will be seen that the functions of the Commission are mainly of a scientific and technical character, and that matters of sanitary and medical organisation do not, therefore, fall within their province and purview. We may point out, however, that we have long thought and often said that the sanitary service in India might be remodelled with advantage. As far as our information extends

there is too much reporting and too little action and directness of aim. A new, increased, and more efficient machinery of a special kind seems to be required, designed somewhat on the lines of the public health organisation of this country, for investigating and dealing with the causes of disease and for supervising and controlling the methods of procedure and expenditure for public health purposes. We fully recognise the difficulties arising from the extent of country and the variety of peoples, their poverty, traditional conservatism, and racial, religious, and social prejudices, as also the need which exists for reconciling them to the Imperial Government — which, it must be remembered, is an alien Government. But when we think of all that is done in England, with its Local Government Board, medical officers of health, and sanitary inspectors, and compare it with what exists and is done in India the contrast is striking. However, as RUDYARD KIPLING says, "that is another story," but one with which the Government of India will sooner or later be brought face to face, if the time has not already come for it to make a beginning.

THE sittings of the Royal Commissioners were resumed on Monday last, and we continue our report of them. In view of the long break in the sittings it will be well to quote the "terms of reference" for our readers and to give also a brief summary of the proceedings. The terms of reference are as follows:—

"To inquire: 1. Whether, having regard to financial considerations and to present and prospective requirements as regards water-supply in the districts within the limits of supply of the metropolitan water companies it is desirable in the interests of the ratepayers and water consumers in those districts that the undertakings of the water companies should be acquired and managed either (*a*) by one authority, or (*b*) by several authorities, and if so, what should be such authority or authorities. To what extent physical severance of the works and other property and sources of supply of the several companies and the division thereof between different local authorities within the limits of supply are practicable and desirable, and what are the legal powers necessary to give effect to any such arrangements.

"2. If the undertakings are not so acquired, whether additional powers of control should be exercised by local or other authorities, and if so, what those powers should be.

"3. Whether it is practicable to connect any two or more of the different systems of supply now administered by the eight metropolitan companies; and if so, by whom, and in what proportion, should the cost of connecting them be borne, and what are the legal powers necessary to give effect to any such arrangement."

At the second meeting of the Commissioners Lord LLANDAFF, the Chairman, announced that the Commissioners accepted generally the findings of the former Royal Commission which was presided over by Lord BALFOUR of Burleigh. He said: "We have decided not to reopen the questions reported upon by the Royal Commission presided over by Lord BALFOUR of Burleigh, and, speaking generally, we accept the findings of that Commission." The BALFOUR Commission, it may be remembered, was appointed to report on the quantity and quality of the Metropolitan Water-Supply. It may be well to restate the terms of reference on which the BALFOUR Commissioners reported. They are as follows:—

"Whether, taking into consideration the growth of the population of the metropolis and the districts within the limits of the metropolitan water companies, and also the needs of the localities not supplied by any metropolitan company but within the watersheds of the Thames and the Lee, the present sources of supply of these companies are adequate in quantity and quality, and, if inadequate, whether such supply as may be required can be obtained within the watersheds referred to, having due regard to the claims of the districts outside the metropolis but within those watersheds, or will have to be obtained outside the watersheds of the Thames and the Lee."

The report issued by the BALFOUR Commission was a long and, in some parts, an argumentative document. The main decisions at which they arrived, however, are given in the following paragraphs of their report:—

"We are strongly of opinion that the water, as supplied to the consumer in London, is of a very high standard of excellence and of purity, and that it is suitable in quality for all household purposes."

"We are of opinion that an average daily supply of 40,000,000 gallons can be obtained from wells and springs in the chalk of the Lee Valley without affecting any material interests; but that if that quantity is exceeded it is probable that the springs and wells in the parts of the valley immediately adjacent to the wells and all the districts further down the valley may be injuriously affected."

"From wells in the chalk area on the south side of the Thames, in the district of the Kent Company, we are of opinion that a daily average supply of 27,500,000 gallons may be obtained."

"From the River Lee we are of opinion that with adequate additions to the present system of storage 52,500,000 gallons may be taken daily."

"We are of opinion that by the construction of storage reservoirs in the Thames valley, at no great distance above the intakes of the companies, it will be possible to obtain an average daily supply of 300,000,000 gallons without taking in any objectionable part of the flood-water."

The Royal Commission which is now sitting met first on Nov. 22nd, 1897, and at the time of its rising for the autumn vacation had sat thirty-one times. At these sittings the London County Council has occupied more than two-thirds of the time of the Commissioners. At the first three sittings evidence was given by Mr. H. L. CRIPPS, Parliamentary Agent to the London County Council. The fourth, fifth, sixth, and part of the seventh sittings were taken up by hearing the evidence of Sir ALEXANDER BINNIE, chief engineer to the London County Council. Sir ALEXANDER BINNIE gave evidence again at later sittings and his evidence occupied part of the twenty-second and the whole of the twenty-third and twenty-fourth sittings of the Royal Commissioners. Part of the seventh and the whole of the eighth and ninth sittings were occupied by evidence given by Mr. H. E. HAWARD, the Comptroller to the London County Council. Mr. G. L. GOMME, Statistical Officer to the London County Council, gave evidence at the tenth, eleventh, and twelfth sittings. The thirteenth, fourteenth, and part of the fifteenth sittings were occupied by taking the evidence of Mr. W. H. DICKENSON, Chairman of the Water Committee of the London County Council. Sir JOHN LUBBOCK, M.P.,

gave evidence at the conclusion of the fifteenth sitting and at the beginning of the sixteenth, and the remainder of the latter sitting was occupied by receiving evidence from Mr. C. A. WHITMORE, M.P., another County Councillor, whose evidence was completed at the seventeenth sitting. The latter part of the seventeenth, the whole of the eighteenth, and part of the nineteenth sittings were occupied by the evidence of Mr. GABRIEL PRIOR GOLDNEY, the Remembrancer to the City of London. The remainder of the nineteenth sitting was occupied by taking the evidence of Sir ARTHUR ARNOLD, another member of the London County Council and a late chairman. His evidence was concluded at the twentieth sitting, at which Mr. SHIRLEY F. MURPHY, Medical Officer of Health of the Administrative County of London, gave brief evidence. The remainder of the sitting was occupied by the evidence of Mr. G. F. DEACON, another witness employed by the London County Council. At the twenty-first sitting evidence was tendered on behalf of the vestries of Islington, Shoreditch, and Wandsworth. At the twenty-second sitting M. GASTON CADOUX, chef de bureau to the Prefecture of the Seine, gave evidence in support of the London County Council. The whole of the twenty-fifth and part of the twenty-sixth sittings were occupied by the evidence of Mr. R. M. LITTLER, Q.C., at that time chairman to the county council of Middlesex. At the twenty-sixth sitting evidence was given on behalf of the parish of St. Mary Abbott, Kensington; and Mr. COLLINS, a resident of Whitechapel, complained of the water-supply given by the East London Company during the years 1895 and 1896. The twenty-seventh sitting of the commissioners was occupied in hearing the evidence of Mr. JAMES BIGWOOD, M.P. for the Brentford division of Middlesex, and of Mr. E. J. HALSEY, chairman to the Surrey County Council. Mr. HALSEY, on behalf of Surrey, said that purchase by the London County Council was in the opinion of his council the very worst settlement which could be arrived at. At the twenty-eighth sitting no less than nine witnesses gave evidence. Mr. HOWARD MARTIN appeared for the Croydon Borough and Mr. SALTER WHITER for the Croydon Rural District Council; Mr. T. H. WATNEY gave evidence on behalf of the Borough of Richmond; Mr. G. J. COURTHOPE appeared for the Kent County Council; Dr. R. M. H. RANDELL for Beckenham in Kent, Lieutenant-Colonel CHARLES KIDD for the Dartford Urban District Council, Mr. A. T. WARING for the Dartford Rural District Council, Mr. F. H. NORMAN for the Bromley Urban District Council, and Mr. R. G. MULLEN for the Bromley Rural District Council. At the twenty-ninth sitting witnesses gave evidence on behalf of the Essex County Council, and of East and West Ham, Barking, and Leyton; and Sir JOHN EVANS, Vice-chairman of the Hertfordshire County Council, was briefly examined on a very important statement which he put in with regard to the water-supply of Hertfordshire. At the thirtieth sitting Mr. HENRY WEEDEN gave evidence on behalf of the Ilford Urban District Council, and Mr. F. G. BANBURY, M.P., a trustee and manager of the Stock Exchange, explained a scheme which had occurred to him as being the best method of purchasing the businesses of the London water companies. At the same sitting Mr. ALLEN STONEHAM, auditor of the accounts of the metropolitan water companies, explained his duties and how he carried them out. The latter part of the sitting and the whole of the thirty-first sitting was occupied by the evidence of Mr. R. E. MIDDLETON, who had acted as Assistant Commissioner to Lord Balfour's Commission, and who now gave evidence as a scientific expert on behalf of the London water companies.

From this point we shall continue the reports of the sittings from week to week.

LAST week we considered the case of JOHN LLOYD-WHITMARSH as standing by itself; there is, however, an aspect of it which is attracting even more attention than the individual facts relating to the death of the unhappy girl ALICE BAYLY. Within the space of a few months two men, COLLINS and WHITMARSH, have been tried for murder at the Old Bailey, each having caused the death of a woman in the endeavour to unlawfully procure miscarriage. The one has been convicted of manslaughter and sentenced by the judge who presided at his trial to a term of penal servitude; while the other has been convicted of murder, sentenced to death, and subsequently reprieved by the Home Secretary, his ultimate fate being thus left in the hands of that official; and the question has naturally been asked by many whether in the two cases there existed any material facts to differentiate them in the eye of the law, or whether some defect in the law of England had resulted in an inequality in the administration of justice.

The law of murder is mainly common law undefined by statute, though interpreted and regulated by the decisions of generations of judges, and in the minds of the writers of the older law books there seems to have existed no doubt but that anyone who by an act done with intent to commit a felony, or by conduct which in his knowledge was likely to cause death and was therefore eminently dangerous in itself, killed another, was in either case guilty of wilful murder. This was carried so far that it could be said that if a man shooting at a fowl with intent to steal it killed someone inadvertently he would be guilty of murder, while it would be only a case of death by misadventure if the man had a right to shoot the fowl through being its owner or only did so out of mischief. It must be borne in mind, however, that this was in a Draconian age, when the fate of criminals, whatever their punishment, was regarded more callously in every way than now, and that, as capital punishment would be inflicted in many instances for the felony itself, the question whether owing to a death occurring incidentally the offence became that of murder was not of the same importance to anyone that it is now. In two conspicuous trials during the past thirty years—in that of BARRETT and others in 1868 for causing the numerous deaths resulting from the Clerkenwell explosion, and that of SERNÉ, who in 1887 set fire to his house for the sake of the insurance, causing the deaths of two of his children who were in it, the law of murder committed without direct intent to kill has been laid down by very eminent judges. We have taken from the summing-up of Sir FITZ-JAMES STEPHEN in SERNÉ'S case our definition of the usually accepted law, but both he and Lord Chief Justice COCKBURN in the Clerkenwell case followed up their general definition

with one apparently modified to suit the requirements of a gentler age. Mr. Justice STEPHEN accordingly said: "I think that instead of saying that any act done with intent to commit a felony and which causes death amounts to murder, it would be reasonable to say that any act known to be dangerous to life and likely in itself to cause death done for the purpose of committing a felony, which caused death, should be murder." In result, the two cases now referred to differed much as those of COLLINS and WHITMARSH have done—BARRETT was convicted of murder and hanged, being the last person publicly executed in this country; SERNÉ, no question of manslaughter being apparently suggested to the jury, was acquitted, but afterwards tried for the arson, which he had clearly committed, and convicted of that less heinous offence. The fact that the crime of BARRETT had resulted in many deaths and caused the greatest excitement and horror in London, while that of SERNÉ was comparatively obscure and unimportant, suggests at once an element of human weakness in the verdict of one of the two, or rather three, juries concerned with these two trials, and before passing on to consider the law applying to COLLINS and WHITMARSH it is not out of place to point out that the same element may have had something to do with the different verdicts in their cases also. It will be remembered that in the case of WHITMARSH there was the dying declaration on which we commented last week, and the evidence and cross-examination of the prisoner. A feeling of greater certainty in his case may therefore have tended to give the jury confidence to return a verdict of murder, though all juries are in theory equally certain and confident. Apparently also, from letters that have been published, individual jurors did not realise that a death sentence would follow their decision, and these letters further accentuate what we have said as to the human element as distinct from the legal in verdicts.

Let us, however, now consider the principles of law laid down above with reference, in practice, to cases of criminal abortion. Of the application of the law in olden days there can be little question. Sir MATTHEW HALE[1] writes: "If a woman be with child and any gives her a potion to destroy the child within her and she take it and it works so strongly that it kills her, this is murder, for it was not given to cure her of a disease, but unlawfully to destroy her child within her, and therefore he, that gives a potion to this end, must take the hazard, and if it kill the mother it is murder and so ruled before me at Bury in the year 1670." And there is more recent authority to the same effect. When, however, we come to the present year we find that the Attorney-General gave the law to the jury in the trial of COLLINS much in accordance with the definition of Lord Chief Justice COCKBURN and Mr. Justice STEPHEN but, in the words of Mr. PICKERSGILL, M.P., who contributed an interesting letter on the subject to the *Times* last week, he "rode from start to finish for a verdict of manslaughter as against a verdict of murder," whereas Mr. Justice BIGHAM, an extremely clear-headed and able judge, presiding at the second and final trial of WHITMARSH, at which Sir RICHARD WEBSTER did not appear—after giving a similar definition of the law, clearly instructed the jury that in his view the application of the law to the facts before them must logically result in a conviction for murder. Now it is so difficult—taking into consideration the facts of each of the two cases and the necessary knowledge of each man as to the danger attending on his acts, performed in the circumstances in which they were performed—to discover differences between them that would warrant a different application of the principles laid down, that we are almost driven to this conclusion:—that by the common law the taking of life in the course of the unlawful procurement of abortion is murder; that the rule of law by which this comes to be so has had its application narrowed and its limits defined to suit the clemency of modern times; and that the question whether a case of death falls within the narrower limits or not depends in a measure on the view taken by the judge or the counsel for the prosecution; while as these guide but do not control the verdict the personal opinions of the individuals who compose the jury form another element of uncertainty. As a result two different verdicts have been returned in two practically indistinguishable cases, the carrying out of the sentence necessarily passed in the second being rendered impossible by the finding of the jury in the first. Similar cases may recur at any time with similarly conflicting results, and this element of uncertainty in the matter of a serious crime demands the attention of lawyers and legislators. Mr. PICKERSGILL, in the letter already referred to, urges the separating of cases of death through the procurement of abortion from other cases now governed by the same rule and recommends a short Act of Parliament for the purpose, giving examples from the codes of India, Italy, and Massachusetts, U.S.A., of the manner in which the crime in question is punished in those countries. It may, however, be found difficult to logically justify the differentiating deaths caused in the commission of one felony from those resulting from another; the legislative machine is not always easy to move and English law has always been inclined to resist codification. It would be easier—and such a course has, we believe, been suggested—to establish a consistent practice for the cases in question. We are inclined to think that the Treasury, which almost invariably prosecutes for such offences, should make it its established practice to indict for manslaughter only, the present Attorney-General being clearly of opinion that manslaughter is a possible alternative. This would produce uniformity and would eliminate the necessity for a jury (with the possible capital penalty before it) having to determine whether the attempt to procure abortion in a particular way is of itself dangerous or whether the prisoner acted with the knowledge or belief that life was likely to be sacrificed by it—questions which result in a jury having to decide on issues hard for jurors to grasp and difficult for evidence to elucidate. It would leave the ultimate punishment where it is now, for the death sentence is never enforced, but would make it in all cases the sentence of the judge trying the case; it would be in accordance with the trend of public opinion; and it would get rid of the feeling, abhorrent to Englishmen, that there is in some cases, even outwardly, an inequality or uncertainty in the incidence of our laws.

[1] Pleas of the Crown, p. 429.

Annotations.

"Ne quid nimis."

LORD MAYOR'S DAY.

As we have already pointed out the retiring Lord Mayor is entitled to the thanks of our profession and will always be remembered as the first Chief Magistrate of the City of London to whom occurred the happy and graceful idea of honouring "Medicine" by entertaining at a banquet at the Mansion House many of its representative members. We may now in "speeding the parting" Lord Mayor offer our congratulations to Sir Horatio Davies on the well-deserved honour which has been conferred upon him by Her Majesty and also upon his very successful year of office, in carrying out the duties of which he appears to have given every satisfaction to his fellow citizens. We have now to "welcome the coming" Lord Mayor, and in so doing are glad to claim him as a comrade in a crusade which was initiated by the Founder of THE LANCET many years ago—a crusade in which, alas, we are not able yet to lay aside our armour, for the battle of the purity of the food of the people is not completely won. Both the Recorder and the Lord Chief Justice at the reception at the Law Courts alluded to Sir John Voce Moore's services in connexion with the prevention of adulteration of food. We, too, thank him for those services and respectfully offer him our good wishes, feeling assured that his tenure of the distinguished office to which he has been elected will be a useful, as we trust it will be a pleasant, one. Another word of congratulation on the occasion of the commencement of a new civic year we may perhaps add, and that we proffer to Lieutenant-Colonel Probyn, one of the present sheriffs, who represents on the London County Council that busy division, the Strand, in which our own labours are carried on. Moreover, the firm of which he is, we believe, the head is one which has dealings with the medical profession, and we feel confident that in his future career, actively associated as he is with the two great municipal bodies of the metropolis, we may count upon his assistance and coöperation in all useful measures of sanitary reform.

IS ETHERION A NEWLY-DISCOVERED ELEMENT?

IN our issue of August 27th we alluded to the alleged discovery announced at a meeting of the American Association of Science of an exceedingly attenuated gas to which had been given the name of "etherion." The gas was said to invade all interstellar space and it was even hoped that it would prove to be the "ether" to the undulations of which alone can many physical phenomena be ascribed. "Etherion" was found in the atmosphere and its density was said to be one-thousandth of that of hydrogen. This and other data afforded chemists a shadow of a hope that they were nearing the discovery or possibly even the isolation of Crookes's "protyle," the primordial element. No one could have been more keenly interested in the announcement than Sir William Crookes himself, who is the author of the word "protyle," which he first employed, we believed, in his masterly essay on the Genesis of the Elements. Sir William Crookes speaks with peculiar authority on alleged new elements and his opinion on the subject therefore must always gain a respectful hearing. His latest reflections based upon his fascinating investigations on "Repulsion resulting from Radiation" in 1873, 1876, 1878, and 1880 tend to lead him to the opinion that the supposed new gas may be nothing more than aqueous vapour, highly attenuated water, so to speak! On the evidence at present available—and the complete evidence, we may remark, is not yet to hand—Sir William Crookes considers it more probable that etherion is water vapour than that it is a new elementary gas, and this is corroborated by the observations made by Mr. Brush, the discoverer, that etherion is absorbed by phosphoric acid and soda-lime, as well as by the powdered glass from which it has previously been driven off by heat. Some have been led to hope that the alleged new element might turn out to be the *materia prima*, but, after all, it appears to be merely water. It is curious that water has once more appeared as an element even when critically examined by the most searching methods which the enormous progress of scientific work during recent years has provided. Aristotle at any rate had no such means at his disposal when he regarded the universe as composed of four elements, earth, air, fire, and water. The last in the scale, nevertheless, has apparently evinced such subtle phenomena as to have led an investigator in this year of grace 1898 to conclude that it was a new element—indeed, the *materia prima*—the protyle out of which all the rest in process of time were elaborated, thus bringing forcibly to the front again Prout's classical hypothesis that the elements were formed from one primary matter by various condensations.

THE PAY OF COLLIERY SURGEONS.

A MOVEMENT has been started among colliery surgeons and other practitioners who undertake duties by contract among the working classes of the county of Durham to obtain a higher scale of remuneration, and no one who looks at the matter with an unprejudiced eye and from all points of view can doubt that these members of our profession have right on their side. At present the colliery surgeon receives a fortnightly subscription of 6*d.* from each collier, which sum entitles the subscriber, his wife, and his family (however numerous) to attendance and medicine. This is the rate of pay that has been in vogue for many years, and no doubt when it was agreed upon between the men and their medical advisers it was felt to be a just arrangement. But different conditions now prevail. The wages of the colliers have gone up very much while their expenses have not increased proportionally and in some directions have actually diminished. On the other hand, while the pay of the medical men remains stationary their expenses have greatly increased. Not only do medical men share in the increased burden of taxation now borne by the middle and lower middle classes, but medical education is, by reason of its length and the arduous nature of its pursuit, a more costly affair than it was in times but recently gone by. Again, many of the drugs that now as a matter of routine find places in the medical man's armamentarium cannot possibly be procured at a cheap rate, while the dressings required by antiseptic surgery, not to mention all the modern developments of preventive therapy, make fresh inroads on his depleted purse. Lastly, the necessity that is now put upon the practitioner to employ only fully-qualified men as his assistants—a necessity which in spite of its hard bearing upon many men we are bound to recognise—has practically doubled the amount which the colliery surgeon must pay in salaries, for no man can discharge his duties as medical officer to a large colliery or manufacturing works single-handed. In view of these facts there can be but one opinion—the colliery surgeons have a right to better pay. We believe that in some isolated districts practitioners are receiving 9*d.* per fortnight from each adult workman, and this is the rate of pay which a combined effort is now being made to obtain for all the Durham medical men conducting practices of this character.

A circular has been issued to all Durham practitioners to ascertain how far their feelings are in accord in the matter, and if a substantial majority approves a formal notification of their intentions will be sent to the men. We can see nothing but justice in the demand of the medical men for adequate payment, while there is no way of obtaining the desired reform save by combination.

DEATH UNDER OPERATION WHEN ETHER WAS ADMINISTERED.

THE lamented death of Miss Mabel Webb, M.B. Lond., of whom we published an obituary notice last week, whilst undergoing an operation for the relief of a perforation of a gastric ulcer offers some special points for remark. We understand from Dr. Pidcock, the lady's medical adviser, to whom we are indebted for some notes of the sad occurrence, that Miss Webb returned home from her hospital duties on Oct. 27th complaining of being ill. Her condition was diagnosed as being due to gastric ulcer with perforation causing peritonitis, and on the following day Mrs. Scharlieb, M.D., M.S. Lond., saw her and operated. Ether was given in very small quantity and taken well. After ten minutes, during which the operation was being performed, and when, indeed, it was nearly completed, fatal syncope occurred. The death appears to have arisen from collapse—the danger in such desperate conditions—and in spite of the ether. It is important to emphasise this, as study of most of the cases imputed to ether reveals that death was due to the collapsed state of the patient and not to the anæsthetic. It is more general than formerly to employ ether in these desperate conditions, and so it is not surprising that the death-rate under this anæsthetic has apparently increased within the last few years.

THE CASE OF DR. J. A. CAMPBELL.

THE trial of Dr. J. A. Campbell, the late superintendent of the Carlisle Lunatic Asylum, on a charge of criminal assault on a female patient, has resulted in a verdict of "Guilty, but insane." The gruesome circumstances of Dr. Campbell's crime need no repetition in our columns. It is sufficient to say that the evidence against him was complete and overwhelming. On the other hand, the evidence of his mental impairment was just as strong. Mr. Norman, the medical superintendent of Richmond Asylum, Dublin; Dr. Clouston, of the Mornington Asylum, Edinburgh; Sir John Batty Tuke, Dr. Rayner, and Dr. Yellowlees, of the Glasgow Royal Asylum, all testified to the unfortunate man's irresponsibility. The judge, in summing up, commented on the fact that Dr. Campbell, according to the evidence, showed signs of insanity months before the act, in spite of which he was allowed to go on in his position superintending the asylum. No one who has seen much of Dr. Campbell of late years when he was away from his asylum work will be surprised that he has landed himself in serious trouble. Drink cannot be indulged in without some amount of deterioration of brain and of mental capacity and the earliest breaking down is sure to take place in those higher controlling centres which enable a man when at his best to subordinate his passions and those grosser weaknesses which, when they become actively dominant, prove that he is not in his right or normal mind. The eminent authorities who gave evidence of Dr. Campbell's insane condition of mind are above suspicion of swearing beyond the mark even to assist an old fellow-worker in his hour of trouble, and there can be no doubt that his criminal act was the outcome of a brain deranged by persistent alcoholism. Indeed, to us it would appear that the act itself, committed upon such a person and in such surroundings, was characterised by an indiscriminate vigour that points not to mere intoxication or alcoholism but to an active wave of diseased mental aberration. There are those possibly who without looking closely into the circumstances of the case may say that Dr. Campbell was fortunate in being found insane, yet these would have been among the first to have declared that an imprisonment for two years would, when all considerations were taken into account, have been a wrongful sentence. Few, indeed, will envy his enforced seclusion as a criminal lunatic. The case is not without its lessons and its warnings to those who give themselves to drink. The legislature were well advised when they made fornication or attempted fornication on the part of an asylum official or servant with a female inmate a statutory offence and one liable to condign punishment.

A JEW'S OBJECTION TO SERVE ON A CORONER'S JURY.

ON Nov. 4th, at Cheetham, Manchester, Mr. Frederick Shires, who had been summoned to serve at the city coroner's court, asked to be relieved of the duty on Scriptural grounds. The Bible, he said, told him he was not to be in the same apartment as a dead body. He had never been in a house where there had been a dead body, and he did not intend to go into one. He handed a letter from Dr. Salomon which, he said, contained proof that he was a son of Aaron. The coroner was very persistent in his objection to such a reading of the Scripture, especially of Leviticus, 21st chapter and 1st verse, and maintained that the objection was only to touching the dead, whichwas not required in a juryman. But he was no match for Mr. Shires in the quality of persistency, and in the end he did not require him to view the body and discharged him. We cannot help feeling regret that Mr. Shires did not strain a point and discharge his duty as a citizen. None of us like contact with the dead and we should all be glad to evade the duty. But it is imposed upon us in the nature of things and we should accept it and cleanse ourselves as best we can. The Jewish religion itself did not allow contact with the dead to exempt from certain duties and to its credit it provided means of cleansing. In a country where the Jews properly enjoy perfect freedom and protection they should take their share in discharging the duties imposed on all citizens by law. We are much mistaken if all who claim to trace their descent from Aaron would take such an impracticable position as that which Mr. Shires assumed.

THE ISLINGTON MEDICAL CHARITIES.

THE parish of Islington has the largest population of any parish in the United Kingdom. An inquiry into its medical charities cannot fail to be interesting at this time of day when the whole system of medical charity is being criticised from all points of view. Such an inquiry has just been made by a fairly representative committee with Mr. G. T. Keele, M.R.C.S. Eng., as its honorary secretary. The committee was nominated by the Islington Ruri-Decanal Conference in November last. For some twelve months it has held a series of inquiries into the working of the various institutions for dealing with the sickness of that portion of the population which cannot command the attendance of private practitioners on ordinary terms. The amount of information and suggestion in this report is very surprising. We shall probably not be far from the truth in assigning the principal credit of this mine of information to Mr. Keele, whose interest in these questions is of long duration. The report needs to be studied as a whole. The main conclusions of it are that there is no need for any more hospital charities but that the existing charities need and deserve support. Many persons think that with the increase in wages of the working classes and the appearance of cheap dispensaries at which all ailments from corns to

convulsions can be prescribed for at 6*d.* a head, all existing and old-fashioned charities may be allowed to die out. The report shows that they are threatened with death by inanition and that society is not feeling the responsibility for their existence which it did a generation ago, but a careful reader of this report and of the conclusions of the committee of the Ruri-Decanal Conference will pause before deciding to starve all such institutions. In London, at least, where rent represents so large a proportion of expenditure and the struggle for life is so keen, there seems still a place for the work of the Dispensary and the Medical Mission. Some suggestions of the report, such as payment of the honorary staffs of hospitals, larger payments by patients, additional collections from churches and even vestries, would require much consideration and qualification to receive our approval. There is a tendency to throw upon overburdened churches and over-rated parishes duties which comfortable citizens should discharge in their own private capacity. A consideration of all the misery which is implied in the work of institutions as detailed in this report will convince such citizens of their responsibility. The corresponding obligation of the institutions not to abuse charity is not overlooked and due credit is given to the Great Northern Central Hospital for rules intended to exclude unfit patients.

PRIMARY MALIGNANT DISEASE OF THE SUPRARENAL BODIES.

IN the *American Journal of the Medical Sciences* for October Dr. H. D. Rolleston and Mr. H. W. J. Marks have published an exhaustive paper on this subject, based on 6 cases which occurred in St. George's Hospital and which they examined microscopically, and 20 collected from literature or obtained from other sources. In order to be quite certain of malignancy they include only cases where there were secondary growths or where there was invasion of adjacent parts, and probably excluded some genuine cases. The incidence in both sexes was exactly equal. The average age was 37½ years; the extremes were 9 months and 73 years. Dr. Rolleston and Mr. Marks remark that it is almost impossible to differentiate histologically an adenoma disorganised by hæmorrhage from a primary malignant growth. Hence they prefer to rely for diagnosis of malignancy on metastasis and invasion of adjacent parts and not on the microscope—a noteworthy fact. In the 26 cases the liver was the seat of secondary growths in 14, the lungs in 6, the bronchial glands in 2, the pleura in 3, the kidneys in 3 (they were also invaded by continuity in 4), the aortic lymphatic glands in 6, and the peritoneum in 3; the heart, cerebrum, cerebellum, bones, and skin each in 1; the other adrenal in 2 (it was also invaded by continuity in other cases). It is difficult to prove, but it has been asserted that both suprarenals were simultaneously affected by primary growths in 2 cases. In 24 cases the nature of the growth is stated: 15 were sarcomata and 9 carcinomata. Suprarenal tumours are soft and vascular and have a tendency to soften in their interior with the formation of a central cavity. The symptoms of Addison's disease in a characteristic form are never induced because the disease proves fatal too soon; but some of the symptoms may occur. Pigmentation of the skin is rarely observed. Vomiting was a marked symptom in some cases. Asthenia was very notable in some cases, but not perhaps more marked than in malignant disease elsewhere. Pain in the back may occur. Dyspnœa may result from pressure on the diaphragm. Œdema of the legs was present in 5 out of the 6 cases observed in St. George's Hospital. In one case pressure on the lumbar plexus caused pains in the left leg. There was also irregular temperature which, as Butlin and Colby have shown, with regard to sarcoma (St. Bartholomew's Hospital Reports, 1895) is not unusual in patients with rapidly growing malignant tumours. Excessive development of hair has been occasionally noted, emaciation is often marked, but in the case of a child, aged three years, the weight was 44 lb.—much in excess of the normal. As to diagnosis, though of considerable size the tumour may from its soft and cystic character entirely escape detection during life, and the symptoms may merely suggest deep-seated malignant disease, latent gastric cancer, or aneurysm. Again, secondary growths in the liver may produce enlargement and give rise to a diagnosis merely of malignant disease of that organ. Peritoneal effusion which may be sanguineous occurs in some cases. If felt the growths are from softening liable to resemble cysts in contrast to renal tumours which are solid and readily palpable. The prognosis is hopeless unless the growth is removed—a more difficult operation than for renal tumours. Mr. H. Morris successfully removed a suprarenal growth, but secondary tumours existed in the liver at the time of operation.

A DEFENCE OF THE MIDWIFE.

DR. THOMAS J. HILLIS of New York lately read a paper at the meeting of the New York County Medical Association which is reported in full in the *Medical Record* of Oct. 1st. The paper was entitled: "Some Remarks on the Midwifery Question—Must the Midwife Perish?" The writer dwelt with eloquence on the past history of the midwife in all countries and stages of civilisation, and with much reverence for antiquity argued that she should be spared—that her abolition would be the ruin of the general practitioner and the triumph of the lady doctor. He maintained that on the whole she is the friend of the general practitioner and sends for him whenever a difficulty arises or a fee has to be obtained. He denies that the mortality is excessive under her gentle and unpretentious rule. He evidently thinks that there is a very peculiar Providence over midwives and their work. "Nature is kind to the puerperal woman in her simple and lowly condition, especially when surrounded by squalor and filth." He draws a vivid picture of the difference between her quiet and homely ways and the ostentatious style of the young disciples of Æsculapius who, with their large and much-containing obstetric bag, invade the households of the parturient women in numbers and for days together before the event comes off, "making about 300 examinations each" with disastrous results, of course. He tells us that half the obstetric work of New York is done by women, most of whom are ordinary midwives, and a small fraction are women doctors; the remainder, a goodly portion, is accomplished through the good offices of neighbours and janitresses, which latter often take the place of first assistants to the historic and much-abused midwife. Dr. Hillis asks us to take a kindly view of the midwife. He certainly is "to her faults a little blind and to her virtues very kind." He insists on her cheapness and on the impossibility of the State preventing lying-in women from having such attendants if they please to have them, all which is too clear to us who have had very recent experience of the limited power of the State to enforce legislation for the promotion of health against the will of the people. But he carries his apology for midwives too far and is correspondingly unjust to medical teachers and students, who, at least in this country, are more careful than at any previous time to do the most good and the least amount of harm to mother and child. In a letter by Mrs. Elizabeth Jarrett, M.D., criticising Dr. Hillis's paper, the writer argues, with very doubtful truth, that women prefer to be attended by women. But she incidentally mentions that "the city of New York is taking care to protect its poor

by paying a proper fee to such institutions as will guarantee to send a reputable physician to attend poor women in their confinements." This is an interesting fact, worth the consideration of those amongst us who wish to improve the chances of lying-in women. No Midwives Bill which we have yet seen contains any provision for ensuring that in every serious case a lying-in woman, however poor, shall have the benefit of qualified medical attendance, and without such provision no Midwives Bill should pass.

THE PUBLIC SCHOOLS AND HOSPITAL STAMPS.

BOYS are all fond of the Prince of Wales and will be very apt to do anything which he asks them to do. He appealed in the early part of the year to the public schools to help him in connexion with his Hospital Fund. The sixth forms and the head-masters have coöperated in circulating the appeal, and already lectures have been delivered on the work of the London Hospitals in the following schools: Epsom College, Marlborough, Shrewsbury, Wellington, and Cheltenham. Hopes are entertained that as the movement spreads, permanent small subscriptions will come from the great public schools to the London hospitals.

THE INQUEST ON THE LATE MR. HAROLD FREDERIC.

THE proceedings at the inquiry before Mr. W. P. Morrison, coroner for the Croydon district, into the cause of the death of the late Mr. Harold Frederic, the well-known author and journalist, terminated on Wednesday last in a verdict of "Manslaughter" against Miss Kate Lyon, a young woman with whom the deceased cohabited, and Mrs. Mills, a Christian Scientist. The verdict registered the opinion of the coroner's jury that Mr. Harold Frederic was influenced by Lyon and Mills when in a state of physical and mental helplessness to his detriment, so that he neglected to take medical advice, with the result that his death was accelerated. The two women were arrested later and released on bail.

DEATHS UNDER ANÆSTHETICS.

THE following particulars of a death under chloroform have reached us. The patient, a child, aged six years, suffered from malignant disease of the jaw. She had three teeth removed at the Birmingham Dental Hospital and was there advised to go to the General Hospital for removal of a portion of the jaw. It was, however, eventually undertaken in a private house and chloroform was administered by a medical man, the "open" method being employed. Mr. Newton, the surgeon in charge of the case, proceeded to remove three teeth and was about to resect a portion of the jaw when the child stopped breathing and eventually died from asphyxia due to the anæsthetic. The death appears to have followed an overdose, the method being one which only too easily leads to such an occurrence. A death occurred recently at St. Mary's Hospital which, although it appears to have been in no sense a death due to ether, yet demands some notice, since it illustrates how deaths "under" an anæsthetic are frequently not "from" the anæsthetic. The patient, a man, aged fifty-one years, described as not being strong, fell some 20 feet into an area and sustained severe injury. He was seen at a hospital and offered admission. This he declined. After treatment at home his medical adviser called into consultation a surgeon from another hospital, who found the man in a most exhausted condition from abdominal distension. This distension had pressed upon and hampered the heart. It was decided that the only chance for the man lay in an abdominal section, and with a view to this he was removed to the hospital and given a small quantity of ether. He was at this time practically moribund, being almost pulseless. While being conveyed to the operating-theatre his pulse ceased and vomiting occurred and the respiration grew laboured, finally ceasing. A post-mortem examination revealed, besides great distension of the abdomen, bruising of the mesenteries. The lungs were œdematous, but they and the upper air-passages were entirely devoid of vomited matter and admitted air freely. There was splintering of the body of the fifth dorsal vertebra, but no injury to the spinal cord except possibly slight compression. The death was syncopal in character and was in no way due directly or indirectly to the small quantity of ether which had been inhaled. We are indebted to Mr. C. H. Straton, house surgeon at St. Mary's Hospital, for particulars of this case. The peculiar danger of cases of distension of the intestines from the point of view of the anæsthetist is the risk of vomiting and the entrance of vomitus into the air-passages. Although vomiting took place in this case the care exercised appears to have prevented this danger. The exhausted state of the patient contra-indicated lavage before giving the anæsthetic or such a procedure would have been advisable. In manipulation of the intestines during operation "reversed peristalsis," so liable to occur, causes regurgitation of intestinal contents into the stomach and induces vomiting. In many instances this has caused death through the vomitus being sucked into the lungs.

CRUSHING OF THE CERVICAL SPINAL CORD: PROLONGATION OF LIFE FOR THREE AND A HALF HOURS BY ARTIFICIAL RESPIRATION.

IN the *Medical Chronicle* for September Mr. J. W. Smith and Dr. J. G. Clegg have published the following case. A cab-driver fell from his box and was admitted to the Manchester Royal Infirmary four minutes later. He was unconscious and his face was livid. Respiration had stopped and the radial pulse was absent, but the heart was beating feebly. Artificial respiration was performed; in ten minutes the lividity disappeared and the pulse became full and strong. When artificial respiration was stopped there was no attempt at natural breathing; the face became cyanosed and the pulse failed. He recovered consciousness and could mutter a few words. Motion and sensation were normal in the face, absent below the neck. If artificial respiration were now stopped an attempt at respiration—spasmodic depression of the lower jaw and angle of the mouth, dilatation of the nares, and protrusion of the tongue—took place. There was abnormal mobility of the head with crepitus, and a hard prominence could be felt in the mouth pressing forward the soft palate. After 2½ hours the general condition was worse and the thorax gradually became rigid, making artificial respiration difficult and finally impossible. He died at the end of 3½ hours. At the necropsy the odontoid process and upper third of the body of the axis were found separated, the atlas was fractured in three places, and the cord was almost completely divided. Mr. Smith and Dr. Clegg have been unable to find any other case of spinal injury in which life was thus prolonged by artificial respiration.

AN ITALIAN CRITIC ON "OPTIONAL VACCINATION."

IF there is a prominent journal in Europe which might be supposed to make "liberty of the subject" supreme, even in matters affecting the public health, it is the *Secolo* of Milan. This very advanced organ, in touch, nay, in active sympathy, with the most uncompromising radicalism, comments in a tone of "pained surprise" (*dolorosa sorpresa*) on the Vaccination Bill which in August last became the law of the land

in England. Considering the authority justly exercised by British practice and British precedent in the hygienic sphere it deplores the enactment as not only disastrous for the community it immediately affects but as supplying an all too welcome weapon for the *laissez-faire* policy which, extended to sanitation, has proved so calamitous in Italy. "Facts, however, are stronger" (it continues) "than the affirmations and the votes even of a British Parliament," and it cites from the statistics of Dr. Ramella, medical adviser in chief to the Turin municipality, most overwhelming evidence as to the benefits which vaccination and revaccination have wrought for Italy in the last decade. Dr. Abba, director of the Municipal Laboratory of Bacteriology, also in Turin, contributes corroborative testimony, and, going further afield than Italy or the European continent, adduces the experience of Buenos Ayres and holds it to be "crucial" in favour of Jenner's discovery. Quoting with entire approval the rescript of the Royal College of Physicians of London as adding an authoritative imprimatur to the views held by all sound sanitarians throughout Christendom the Milanese organ reproduces textually the statement of Dr. Vallin, the distinguished French hygienist: "In France the healing art as a whole, and her scientific bodies generally, have not ceased for the last twenty years to insist on compulsory vaccination;" and it concludes: "And we in Italy who have had such vaccination for ten years, and for ten years have been able to attest its good results, are now to be told that vaccination is useless where it is not mischievous. Fortunately with us the abolitionists are apostles without followers and without credit."

PSEUDO-HYPERTROPHIC PARALYSIS.

FOR once in a way we make an exception to our general rule and answer a layman on a question of medical treatment. The following letter is our excuse: "I have a little boy, aged ten years, suffering from hypertrophy (mock paralysis). Up to nine years of age he was still able to walk a certain distance, although in his gait he waddled somewhat from infancy. He has been under electric treatment for eight months in a hospital, but has returned home so much worse that he cannot stand or walk. ..... I should be most thankful if you could advise or suggest in such a case anything that could be done for him." It is evident that our correspondent's letter refers to a condition of pseudo-hypertrophic paralysis, in such a case as is described probably one of the most hopeless of maladies. It is true that with the wider experience of this disease which recent years have brought we are justified in regarding it more hopefully in many cases. The disease was formerly regarded as inevitably progressive. Now it is recognised that in many cases after a certain stage is reached it ceases to progress and a patient may even improve a little. But before this stage is reached it usually happens that a condition of greater or less helplessness has been established. Unfortunately medical treatment seems to have little if any effect in modifying the progress of the malady. Electrical treatment, massage, passive and active gymnastic exercises have all been tried, but so far as we are aware without any striking result. The usual nerve tonics, strychnia, arsenic, &c., have also been used, and no doubt their influence is in the right direction. Unfortunately it seems as if the cases in which the malady begins in early life and rapidly attains a degree in which it disables the patients are the worst in regard to any hope of improvement in the power of locomotion. But the general health often remains good and the condition is at least one which is unassociated with physical pain. Our correspondent may feel sure that from the staff at the hospital at which the patient has been under treatment so long he will receive the most judicious advice as to what he should do and what he should leave undone in his efforts to alleviate the sad condition of his boy.

THE PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.

AT the present time the medical staff of the Preston and County of Lancaster Royal Infirmary are engaged in a contest with the board of management with regard to being represented on that board. In similar hospitals it is usual for the medical staff to be well represented on the committee of management, but the medical staff of the Preston Infirmary have no representation whatever on that board. As yet they have not been able to get their claims recognised. To our minds this state of matters is a perfectly intolerable one. Who are those who do the main work of an infirmary? We are far from ignoring the toil undertaken by the administrative staff, by the steward, the clerks, and other lay officials, but the essential reason for the existence of the infirmary is the care, treatment, and healing of the sick. For this the medical staff, and no one else, is responsible. It is, therefore, not only grossly unfair but also absolutely wrong that the members of this staff should not be represented on the board of management. We should doubt if a similar anomaly exists at any other large hospital in Great Britain and it is one which should be done away with as soon as may be. Questions must constantly be in debate which can only be properly considered or answered by a medical man. Imagine an institution on the same lines connected with the sister faculty of law at which a staff of lawyers should attend in order to give advice to litigants or would-be litigants. Does anyone imagine for a moment that the said legal staff would not insist upon being fully represented on the board of management? There must be some occult influence about a board, or else why do the members of such almost invariably act in a manner which must be absolutely contrary to the feelings and habits of the individual members composing it? It would be a pity if the medical staff were to resign, but the present board should recollect that the staff has it in its power to do so and will be justified in so doing if its claims are not recognised.

PHARYNGO-MYCOSIS.

A DOUBLE interest on the ground of diagnosis and of treatment attaches to a condition of the throat which is most common in young children and known of late years by the name of pharyngo-mycosis. A short but careful study of this disease by Dr. Lubet-Barbon in the *Annales de Médecine et Chirurgie Infantiles* is therefore worthy of attention. The parts affected are the small closed glands in the mucous membrane of the tonsils, pharynx, tongue, and more rarely the pillars and velum of the soft palate. In these are firmly planted the small caseous-looking hard plugs characteristic of the disease. Microscopically examined they are seen to consist of a more or less conical sheath of epithelium containing tubules of leptothrix. The marked indolence of this disorder, the occurrence of small scaly patches of the size of a pin's head among the larger ones formed by confluence of the smaller, and their firm attachment by a peg-like root are features which suffice to distinguish it from another somewhat like it—namely, lacunar tonsillitis, in which the interfollicular spaces of the tonsil are occupied by a pultaceous deposit easily squeezed out by pressure. It is noteworthy, however, that in some cases local irritation gives rise to tonsillar inflammation even in pharyngo-mycosis and then the difference between it and more serious disorders is not easily recognisable. The writer above-named quotes

a case in which this difficulty gave rise to the diagnosis of diphtheria with troublesome results in the course of treatment. Local measures are alone effectual for the cure of the disease. Dr. Lubet-Barbon's method is to begin with chlorate gargles or painting with iodine or an iodide, then at a series of successive sittings to pick out the adherent plugs with flat-pointed forceps and cauterise their matrices with chromic acid under cocaine anæsthesia, warm gargles being used to allay subsequent irritation.

THE BACTERIOLOGY OF ENTERITIS.

PROFESSOR ESCHERICH of Gratz, whose views on the causation of infantile diarrhœa we quoted in THE LANCET of Jan. 30th, 1897, contributes to the *Journal de Clinique et de Thérapeutique Infantiles* of Oct. 6th the abstract of a paper on the importance of bacteria in the causation of gastro-enteritis in children. While he does not dispute the fact that putrefactive changes occur in milk, in the albuminoids of the intestinal secretion, and in the casein constituent of the diet of infants, changes due to the action of microbes, he does not believe that they account for the severer forms of enteritis. These disorders, which exhibit the characteristic signs of fever, a tendency to epidemic prevalence, and a typical clinical history, he attributes in the great majority of cases to the presence of streptococci which are found in abundance in the fæces and are biologically similar to the pneumococcus. The attacks vary in intensity from an ordinary catarrh to acute forms of inflammation with secondary infection of other organs besides the bowel and even an ultimately fatal septicæmia. The staphylococcus and the bacillus pyogenes in like manner are credited with the power of producing an inflammatory form of diarrhœa. As to the bacterium coli commune the writer while allowing it a similar position is unable to agree with some observers who regard it as the specific microbe of infantile diarrhœa and especially of the so-called "cholera infantum." He has been able to record only three cases of the disease which could be attributed to the sole action of this germ to the exclusion of the others. According to him therefore gastro-enteritis is not really a specific disorder, but may arise from a variety of micro-organisms any one of which may be normally present in the alimentary canal and become a cause of mischief under certain conditions. A careful diet and good general hygiene, he reminds his readers, are of the greatest value as means of treatment and he emphasises the necessity of recognising the gastro-enteritis of children as an infectious disease which entails appropriate measures of precaution to prevent its propagation.

RECENT ADVANCES IN BRAIN SURGERY.

PROBABLY the most striking advance within recent years in any department of surgery has taken place in the operative surgery of the brain, and this fascinating subject was selected by Dr. Henry O'Neill of Belfast for his address, as President, to the members of the North of Ireland Branch of the British Medical Association. The bad results of former days, as Dr. O'Neill pointed out, were due chiefly to imperfect knowledge of the cerebral motor areas and a want of aseptic precautions in the treatment of wounds. For ascertaining the position of these important "areas" Dr. O'Neill expressed a strong preference for the method of localisation devised by Professor Chiene; this depends on certain natural points and not on inches and angles which are not applicable to all skulls. The technique of the modern operation was fully described; the large horseshoe-shaped flap was preferred, and the bone was only sawn so far as the scalp incision went, the remaining bone at the "base" of the flap being broken through; in this way the raised portion of bone can be easily laid down with the scalp flap when the wound is being closed. In agreement with the most general practice nowadays in these operations Dr. O'Neill never drains unless it is absolutely necessary. When the wound has been dressed it is not disturbed for at least a week unless the temperature exceeds 100° F. or the patient complains of severe pain and restlessness. In order to illustrate the practical results of this treatment 4 cases were quoted in which patients with very severe injuries to the head were dealt with by these methods and the patients themselves were exhibited to the meeting. In one case marked dementia had appeared after a fall from a height of 12 ft. on to the head, but three or four days after trephining on the site of a fissured fracture of the skull the mental symptoms entirely subsided. This case is illustrative of the best modern treatment, for even if no fracture be discernible an exploratory examination of the contents of the skull is fully justified if marked functional derangements succeed the primary effects of intracranial injury.

ON Sunday afternoon, Nov. 20th, Dr. E. Baxter Forman, J.P., L.C.C., will lecture at the South Place Institute, South-place, London, E.C., on "Medical London," with lantern illustrations, being the sixth of a course of Sunday Afternoon Free Lectures on "Our Cities and Municipalities."

THE annual meeting of the Fellows and Members of the Royal College of Surgeons of England will be held on Thursday, Nov. 17th, at 3 P.M., as has already been announced in our columns.

THE Roentgen Society will hold a conversazione at St. Martin's Town Hall on Monday evening, Nov. 21st, from 8.30 to 12, at which there will be music and demonstrations of x rays.

PROFESSOR WILLIAM MACEWEN, M.D., LL.D. Glasg., has been elected a corresponding member of the Medical Academy of Rome.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE thirty-second sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Monday, Nov. 7th. The Commissioners present were Lord Llandaff (chairman), the Right Hon. John William Mellor, Q.C., Sir John Dorington, M.P., Sir George Barclay Bruce, Mr. de Bock Porter, Major-General Scott, and Mr. Robert Lewis.

At the commencement of the proceedings the CHAIRMAN said that he proposed to deal first with one small subject of the inquiry—the intercommunication between the mains of the different water companies. The President of the Local Government Board had asked the Commissioners to report upon that subject as soon as possible with a view to immediate legislation.

Mr. POPE, Q.C., on behalf of the water companies, said that they had considered their position with regard to this question and were prepared to offer evidence as to the practicability of an interchange of water between the companies. The question, however, involved so many considerations of detail that it seemed best to them to save the time of the Commission by dealing with the general question rather than to go into great detail with regard to any particular scheme of connexion. The companies had come to the conclusion that the intercommunication between them would be convenient, and they therefore proposed to promote next session a Bill dealing with the matter. At the present time the companies had not the statutory power to undertake work for any purpose beyond their authorised districts of supply, and there were special obligations which bound individual companies not to supply

water beyond their authorised areas. On behalf of the associated water companies he wished to call the attention of the Commissioners to a series of resolutions which expressed in general terms their views with regard to the contemplated legislation. Briefly, the scheme of intercommunication was practicable, but it was desirable that some authority should be armed with the necessary power to say in what way the connexions should be made, not only in the case of an emergency but at any other time, and they suggested that matters of detail should be left to the Local Government Board to decide, and that the companies should be placed under an obligation to carry out decisions on the subject given by that Board.

The CHAIRMAN pointed out that they had been asked to advise not only whether it was practicable to connect the different systems of supply, but if so by whom and in what proportion the cost should be borne, and what new legal powers were necessary to give effect to such an arrangement.

Mr. POPE said that these matters had been considered by the companies and that they had agreed to introduce a bill dealing with the matter. The provisions of the bill which the companies proposed to submit were, *inter alia*, to the following effect:—

1. The companies forthwith to consider what works are required for the above objects and to submit proposals to the Local Government Board for approval. The Local Government Board to be empowered to approve and authorise such works with or without modifications or to authorise and order other works for the like objects.
2. Further works for the above objects may in like manner be from time to time authorised and ordered if and when required.
3. The respective companies to carry out in their respective districts all works so authorised.
4. The Local Government Board to be empowered to authorise the supply of surplus water from the works of any company to the works of any other company for the time being requiring the same and the Local Government Board to have power in case of emergency to authorise any of the companies to take more water from the Thames than they are now authorised to take.
5. All expenditure of the respective companies in relation to any such works to be deemed capital expenditure and for the purpose of meeting such expenditure the Local Government Board to be empowered from time to time to authorise the respective companies to issue an additional amount of debenture stock.
6. No contribution to any sinking fund to be made in respect of capital issued for the foregoing objects.
7. Subject to reasonable contribution by any company taking and utilising by means of the proposed works and powers water which it would not otherwise have been enabled to take and utilise, the interest on debenture stock applied by the respective companies for the foregoing works to be borne by the eight companies in proportion to their respective water rentals.
8. Any company taking water from another company to pay for such water to the company supplying it at a rate to be agreed upon or fixed by arbitration.
9. A standing arbitrator to be appointed by the eight companies or failing such appointment by the Local Government Board, and in case the respective companies do not agree amongst themselves such arbitrator at the end of each year to decide as to the contribution of either company taking and utilising the water rendered available by the proposed works and also to decide any matters in difference between the companies.

The CHAIRMAN pointed out that the proposed legislation was designed to give novel powers to the companies. In the first place they were to be allowed to draw water from the Thames under new regulations; in the second place, there was no provision for a sinking fund; and, thirdly, the Local Government Board was authorised to arrange for the raising of capital for an emergency.

Mr. POPE said that the extra amount of water from the Thames was only allowed to be taken in cases of emergency, that the expenditure in carrying out the connexions between the mains might rightly be deemed capital expenditure, and that it was proposed to appoint an arbitrator to decide any questions of detail with regard to the issue of additional debenture stocks.

Mr. ERNEST COLLINS, one of the engineers to the New River Company, was examined by the Chairman with regard to the question as to whether it was practicable from an engineering point of view to connect the different systems of supply in the case of all the existing water companies. The witness admitted that at the present time in periods of drought hardly any of the companies had water to spare.

The CHAIRMAN asked in that case what was the use of intercommunication and the witness replied that that point had been considered in drawing up the scheme, and that the engineers of the companies had received instructions in the autumn of last year to consider the real practicability of the scheme. At that time they found that the Chelsea Company was the only one that had any surplus water at times of the greatest pressure. The Chelsea Company was authorised to draw from 8,000,000 to 10,000,000 gallons every day from the Thames in excess of the amount which they really required for the supply of their district. At the time of pressure the other companies had sufficient for their own supply but none to spare That fact seemed to the witness to strike at the root of the desirability of intercommunication. Intercommunication was useless if there was nothing to communicate.

Mr. POPE pointed out that since the time at which the engineers consulted on the matter (September, 1897), the Southwark and Vauxhall Company had obtained additional powers to abstract water from the Thames. The witness said that their report of 1897 had been drawn up with a view to providing for the accidental breakdown of a pumping engine, the fracture of a main, or a temporary disablement of the works. It would not provide for any great failure of supply such as that which had taken place in East London during last summer. At the present time the Southwark and Vauxhall Company were authorised to take about 10,000,000 gallons daily in addition to the quantity which they required for carrying out their present supply, and the Chelsea Company had a surplus of 8,000,000 to 10,000,000 gallons.

In answer to the CHAIRMAN the witness said that he did not consider the report which the engineeers had drawn up in 1897 was the best mode of giving intercommunication, and in answer to Mr. DE BOCK PORTER he said that the experience of the past year had led the engineers to modify the proposal originally made. He thought that with the exception of the East London Water Company the other companies were capable of taking care of themselves.

In answer to the CHAIRMAN the witness said that he had a better scheme than that which the engineers had originally suggested, but that he was not authorised to say that it had been approved by the boards of directors of the water companies. A permanent scheme such as the one he had in view would require a considerable outlay. The cost of the original scheme on which, as the Chairman suggested, he now threw cold water, amounted to something over £307.000, and that scheme was practically only wanted for the use of the East London Waterworks Company. The original scheme, however, would not be sufficient to make good the effects of a drought like that experienced last summer; it would be sufficient only to overcome some temporary breakdown in the machinery and mains. The scheme which the witness suggested as being the best was to make use of the station at Battersea which belongs to the Southwark and Vauxhall Waterworks Company. He suggested that that company instead of giving up this station as at present proposed should make an arrangement by which it might be utilised by all the water companies. A description of this station has already been given in THE LANCET; it contains reservoirs, filter beds, and pumping engines. According to Mr. Collins's scheme water would be filtered at this station and pumped in different directions by mains specially laid to convey it. The first main would go from Battersea to Campden-hill to the reservoirs of West Middlesex and Grand Junction Companies. The second main would pass from Campden-hill to New River Head. The third main would go from Battersea to Claremont-square, another New River station. The fourth main from Battersea to the Brixton station of the Lambeth Company and the fifth from Battersea to the Nunhead station of the Vauxhall and Southwark Company. With regard to the cost of this scheme the witness suggested that the value of the Battersea station for building purposes was about £10,000 an acre and that it contained 30 acres. The Southwark and Vauxhall Company had sold part of the land and it was arranged that the station should be given up. The new proposal, therefore, was that the Battersea station should be continued in working order and that new mains should be laid down in the directions suggested. In addition to this, to complete the scheme it would ultimately be necessary to lay another main from the Thames intake to the Battersea station to convey the unfiltered water, for the main at present used for that purpose will ultimately be required for the distribution of water by the Southwark and Vauxhall Company for the supply of their own customers. The work of laying mains from Battersea to the reservoirs of the different companies would take about eight months to carry out.

The CHAIRMAN asked who should pay for it, and the witness said that he could give no help with regard to the solution of that problem.

Mr. RESTLER, engineer to the Southwark and Vauxhall Company, described the Battersea station of that company at

Battersea, giving some information which has already been published in THE LANCET in the description of these works. He said that in his view the scheme which had been propounded by Mr. Collins was in every way superior to that which had previously been advised by the engineers of the companies.

Mr. W. H. BRYAN, engineer to the East London Waterworks Company, in answer to the Chairman said that he had that morning received a letter asking him to give details as to what connexions it would be necessary to make in order that his company should be able to ensure the proper supply of water next year in case there should be a drought similar to that which has obtained during the present year. The witness said that since the morning he had been unable to go into the details which he had been asked to give and that he would be prepared to give the necessary evidence next week. In answer to Major-General SCOTT Mr. Bryan said that he thought that if the work were vigorously proceeded with the works mentioned by Mr. Collins could be completed by the end of next summer, but it would be impossible to finish it if they had to wait for an Act of Parliament for its authorisation. At the present time the East London Waterworks Company were receiving 5,000,000 gallons of water daily from the Southwark and Vauxhall Company, 200,000 gallons from the Kent Company, and 8,000,000 gallons from the West Middlesex, Grand Junction, and New River Companies.

Mr. JOHN HOLLAMS, legal adviser to the Associated Water Companies, gave it as his opinion that it was impossible to formulate any definite permanent scheme of intercommunication. The plan must vary from time to time as population increased or circumstances changed. It would be better, therefore, if the companies under the control of the Local Government Board were to be empowered to meet emergencies as they arose. In the opinion of the waterworks companies, including, he believed, the East London Company, the proposed works were unnecessary, yet the companies were prepared to carry them out to guard against difficulties in the event of some unlooked-for event.

The thirty-third sitting was held at the Guildhall, Westminster, on Tuesday, Nov. 8th, Lord Llandaff presiding, when Mr. John Hollams concluded his evidence, and the chairman of the Southwark and Vauxhall Company, Sir Henry Knight, emphasised an opinion that there had not been an insufficient supply of water in East London during the summer of 1898. We must delay a detailed report until next week.

"THE RECENT EPIDEMICS OF PLAGUE IN BOMBAY."

A VERY interesting as well as elaborate and carefully considered paper on this subject was read before the Geographical Society of Manchester in May last by Mr. H. M. Birdwood, C.S.I., LL.D., and has now been issued in the form of a pamphlet. Mr. Birdwood was formerly a Member of Council and one of the judges of Her Majesty's High Court of Judicature at Bombay, and was present during the first epidemic of plague in that city. He is consequently entitled to speak with some authority on the subject, and his legal and official training has enabled him to sift and arrange the facts so as to present us with a very clear and relevant historical record, as well as a concise but correct medical history, of the epidemic. All medical authorities, in the first place, are agreed as to the identity in character of the "bubonic fever" of Bombay with the disease historically known as plague, and also as to the probable identity of the highly infectious pneumonic type of the disease, in which the characteristic glandular enlargements are not always present, with the Black Death of the fourteenth century. In the latter form, of which the recent occurrences at Vienna have furnished a very striking example, the bacillus pestis of Kitasato is present in large quantities in the patient's sputum. That this bacillus is endowed with highly pathogenic properties and is the cause of the disease does not admit of any doubt, for the tragic occurrences of the Vienna outbreak have almost partaken of the nature of a scientific experimental demonstration of it. There are, as we have frequently said, various conditions connected with the life-history of the plague bacillus about which we as yet know little or nothing, such as its habits and manner of life, whether in the soil or in the air or in the bodies of men and the lower animals, the conditions which favour its growth and the development of its poisonous powers, the ways by which it effects an entrance into the body, and the methods by which susceptible individuals, races, and communities may be rendered immune to its attacks. We require also to study the conditions favourable to the rapid growth and diffusion of this micro-organism and the way in which it comports itself when multiplied and aggregated so as to give rise to epidemics. A brief and interesting summary is given in the paper under review of the history of plague and its geographical distribution and the part it has played in the world in past times. The bacteriological researches of modern inquiry have thrown a new and most important light on the subject and given a precision to our studies such as we did not possess hitherto. We are consequently making some real progress in our knowledge in various respects. The great difficulty with which we have to contend in the case of plague and other epidemic diseases is that attending the discovery of their first importation into any given place and the prompt recognition of the cases primarily attacked. The circumstances connected with the importation of plague into Bombay, for example, have not been definitely traced and the disease was, no doubt, actually present and spreading in a densely crowded community for several months before its real character was recognised, and it had consequently had time to take root and to establish itself as an epidemic before official methods for its control could be properly or efficiently applied. Although the measures adopted in India may not have been so successful in stamping out the disease as could have been desired, it is quite a mistake to suppose that they have therefore done no good, for the evidence points the other way. Practically it all depends upon carrying the natives with us if our efforts are to be successful. The Indian Government have taken immense pains and gone to great expense, as well as incurred great opposition, in their attempts to combat the disease.

At Poona, which is a hotbed of disaffection, the efforts which have been made in this direction have been very successful. The whole question of plague requires to be thoroughly gone into with the view not only of finding out its various endemic centres—the geographically independent plague foci for its periodical spread—but the insanitary conditions which favour its development in different localities, as well as the question of the prophylactic safeguards against the disease which can be adopted, in which direction M. Haffkine, for example, has worked with so much scientific zeal and apparent success. We are very glad that a scientific commission has been appointed to investigate and report upon all these points. Meanwhile Mr. Birdwood's paper is well worthy of study.

Telegraphic reports from India show that the plague returns for the week ending Oct. 29th have continued to decline as regards Bombay city, the deaths reported being 96, as compared with 116 in the previous week. Nearly 5000 deaths, however, occurred in the other districts of the Bombay Presidency. The disease continues to increase in Mysore State, 400 deaths being reported from Bangalore, and it shows a tendency to spread. There is a slight decline in the Madras districts, while Upper India is free.

"THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS."

TUBERCULOSIS AND THE CONTROL OF OUR MEAT-SUPPLIES.

SIR RICHARD THORNE, who has chosen the above title for the Harben lectures of this year, delivered the first of a series of three weekly lectures at the Examination Hall of the Conjoint Examining Board, Victoria-embankment, on the 2nd inst. The earlier portion of the lecture was taken up with a review of the action which had been adopted during the last forty-five years in the control and prevention of the different forms of tuberculosis, and of the results achieved, as shown by certain vital statistics which had been specially prepared by Dr. J. F. W. Tatham for the purposes of the Royal Commission on Tuberculosis appointed in 1896.

The diminution in the rate of death effected during this period was illustrated by contrasting the period 1891–95 with that of 1851–60, and it was shown that for all forms of tuberculosis collectively the diminution had been constant, that it had applied to all ages, and that at certain age periods it ranged from no less than 30 to over 50 per cent. In the case of phthisis the diminution had been even greater, reaching at certain periods of life a reduction of over 60 per cent. All this had been effected before the discovery of the tubercle bacillus had led to any special action based upon bacteriological knowledge; it had resulted in the saving of hundreds of thousands of lives and, as the lecturer put it, if with the advantage of increased and accurate knowledge as to the causation of tuberculosis as much can be accomplished during the next half century as has been accomplished in the period 1851–95, death from pulmonary tuberculosis at many age periods will then be entirely abolished in this country. This point was urged because the lecturer deemed it so important that the former methods of prevention should not be lost sight of but should still be pressed forward in continuation of a work which had been so eminently successful in the past. These methods were explained at length. They had to do, in the main, with all the administrative measures by which increased movement of air and access of light were secured about and within our dwellings and with those which had led to a lowering of the level of subsoil water in our towns and in the neighbourhood of villages and dwellings.

But in contrast with this great success it was next pointed out that in the case of death from tabes mesenterica the diminution in the rate of death had not only been quite trivial at most ages, but that under one year of age the whole of the advantages from sanitary measures had been lost, and there was in addition an actual increase in the amount of death when the later years of the past half-century were compared with the former ones. This was held to be due to the fact that whilst in the case of phthisis the infection is in the main received aerially it is received by the digestive tract in the case of tabes mesenterica; and it was sought to ascertain what change or changes had taken place during the term of years in question which had turned the gain achieved in the case of the aerial infection into a loss in the case of an infection received by the alimentary tract. The answer was that the explanation was to be found in food supplies—namely, meat and milk.

The remainder of this first lecture was devoted to the question of meat in relation to tuberculosis. The view expressed was that the source of danger from this cause had been overrated by some who demanded measures of considerable stringency, and it was shown that the experiments on which some of these opinions had been based—such as the intentional inoculation of meat used for feeding purposes—were of the nature of laboratory experiments and found little or no parallel in everyday life. So also it was pointed out that the greatest diminution in the rate of tuberculous death had taken place not only at the meat-eating ages, but during a term of years in which there had been an enormous increase in the amount of meat consumed in this country.

The demand for compensation by butchers out of public funds when tuberculous carcasses were seized was next considered, and the lecturer held, for a number of reasons which were set out in detail, that it would be altogether wrong in principle to allow a trader who voluntarily placed an article of food on sale to take the whole profits if the article was sound and to be compensated out of the public funds if it turned out that he had made a bad bargain. The true remedy, it was held, for the control of such danger as existed from eating meat that was tuberculous lay in the abolition of private slaughter-houses and the provision of public ones in which a uniform system of inspection and a uniform standard for condemnation would be observed. This matter of public slaughter-houses was held to be the governing factor in dealing with the risk due to tuberculous meat.

As regards imported carcasses it was maintained that inspection of them should be instituted at the ports of arrival, the expenses of the staff and necessary establishments to be covered by a small tax on each carcass imported.

TUBERCULOSIS AND THE CONTROL OF OUR MILK-SUPPLIES.

The second lecture was delivered on Nov. 9th, on the subject of the administrative control of milk-supplies in relation to tuberculosis in man. Sir Richard Thorne adverted again to the fact that during the last half-century there had been an immense reduction in the death-rate from many forms of tuberculosis, notably of phthisis, in connexion with great sanitary improvements that had been effected, and he recalled the fact that infants and children must, according to all experience, have benefited correspondingly. But when the death-rates from tabes mesenterica, a form of tuberculosis in which the infection is received into the alimentary canal instead of into the lungs were examined, it was found not only that all the gain attained at other ages had been lost in the case of children and infants, but that in addition to this there had been a very heavy increase in deaths from this cause amongst infants under one year of age. The saving of life from tuberculosis in all its forms and from phthisis had been at the rate of from 45 to 66 per cent. at different ages; whereas in the case of infants under one year of age, not only did all this gain disappear in so far as tabes mesenterica was concerned, but there was in addition an actual increase of 21·7 per cent. during the past fifty years. Very similar results had followed as regards tuberculous meningitis; and both these forms of tuberculosis were essentially due to the reception of the tuberculous infection into the alimentary tract. This increase had also gone hand in hand with a steady increase in the consumption of cow's milk as a food in this country; English people being almost the only civilised nation in the world who habitually consumed uncooked milk. He then showed from official returns how large was the amount of tuberculosis amongst milch-cows; and quoting the report of the Royal Commission on which he had served he explained that the artificial conditions under which milk was now produced in cowhouses, which the animals sometimes never left for a single moment during the period they were in milk and which at times reached a whole year, were precisely those most certain to produce that increase of this disease in cows which had been going on. Fortunately the immediate danger to man was limited to the existence of tuberculosis in the cow's udder, but the early stages of this affection were most difficult to detect and it was a form of tuberculosis which tended at times to spread with great rapidity. The danger to man, and especially to the infant population, was one of real gravity, and the loss of child-life due to this disease in milch-cows was appalling. He did not recommend, as some had done, the removal of every tuberculous cow from the dairies and cowsheds, for this, at the lowest estimate, would mean the removal at once of over half a million cows from our milk-supply, but all cows with advanced tuberculosis in any part of the body, and all cows with suspicious disease of the udder, should be at once seized and slaughtered. Amongst the most prominent of remedies was the provision of adequate cubic and floor space in cowsheds so as to ensure proper ventilation; and he showed that this was often more necessary in country than in town cowhouses because the latter are often much more under control than the former. Both in Liverpool and in Manchester the percentage of samples of milk containing tubercle bacilli was far greater in the case of country milk than in that obtained in those cities themselves. He further advised the abandonment of the practice of keeping cows for months with their mouths and nostrils against a wall—a practice which secured for them the least chance possible of breathing fresh moving air, and he advocated frequent and systematic inspection of cowsheds and dairies by expert officials. As regards compensation for animals seized his views were not the same as those which he had expressed against any such payment from public funds in the case of the seizure of tuberculous carcasses voluntarily put on sale by the butcher. In the case of the milch-cow the milk alone was placed on sale, and whilst the use of the milk should be at once stopped, the cow might be perfectly good and of value for feeding purposes to be sold as meat, and whatever value attached to a cow in this sense should be repaid if the animal was seized and slaughtered by the local authority. He further maintained, as he did in the case of meat-supplies, that any stringency of control over home supplies in the case of milk should, as far as practical, be also maintained over imported milk and milk products, as, for example, by appointing inspectors at our ports and by chemical and bacteriological examinations of the materials imported; the whole expense to be borne by a small tax on all such articles as are imported. Incidentally he referred to the success attained in the diminution of tuberculosis in cows in Denmark by the aid of the tuberculin test, and finally he most strongly urged that

English people should be educated to acquire the habit of cooking their milk before using it. He set aside the ordinary objections raised to this proposal, and he showed that if milk were boiled for a single instant the danger of tuberculosis would be gone, and a cause of thousands of deaths every year amongst children and young adults would be removed. He appealed to the medical profession to use their great influence in thus controlling the present waste of life which followed on the use of uncooked milk.

The third lecture, to be delivered on the 16th inst., will deal with the question of the compulsory notification of tuberculosis.

THE LATE OPERATIONS ON THE INDIAN FRONTIER.

THERE was a large muster of members and guests at the Camera Club, Charing-cross-road, on Thursday, Nov. 3rd, when Major Beevor, R.A.M.C., Surgeon-Major of the Scots Guards, exhibited a series of views of the Indian frontier taken during the recent campaign. For some two hours Major Beevor kept his audience in rapt attention and brought the conditions of active service vividly before them.

Our Indian frontier lies upon a line drawn east and west along the very high range of mountains called the Samana range, at one end of which is a deep defile and at the other side a long line of hills called the Dargai heights where it will be remembered the Gordon Highlanders displayed such courage in storming the heights. The difficulties which our troops had to encounter and overcome could never have been brought home to people here except by the aid of photography and that art never received a better testimonial to its value than on Thursday when Major Beevor showed the results obtained by the camera in the field. The marksmanship of the Afridis was remarkable, though their boast that they could easily pick out a man's right eye from his left as a target was never demonstrated. The ridge above the heights was held by more than 8000 men, and so accurate was their fire that anyone who for a moment appeared in view was immediately shot. Indeed, had it not been that our men showed an utter disregard of certain death the sacred valley of the Afridis would never have been entered and the superstition that no white man even dared to look into it would have been verified. It must therefore be recorded to the honour of Colonel Mathias, of the Gordon Highlanders, that to his bravery we in a very great measure owe the initial victory. The accuracy of the reports of this gallant officer's speech on the heights of Dargai has been impugned, but Major Beevor vouches for the truth of the reported words. Standing upon a piece of high ground Colonel Mathias addressed his men and said—"The General says that position" (pointing to the top of the hills) "must be taken at all risks and the Gordons shall do it. Follow me." We need not dwell on the lecturer's description of the taking of the heights, as that story is now quite familiar to our readers, but there are other details which are interesting. Incidentally the lecturer mentioned that on one occasion while storming these heights the men in hospital broke out and all bandaged as they were rushed after their comrades to take part in the charge. As showing the deadliness of the enemy's fire on this occasion as many as 15 or 20 bullets were found in some of the killed. At the other side of the heights the men encamped in a valley and during the night were assailed by the enemy, who, however, received such a warm reception that they soon retired. On the following morning a man was found outside the camp with a quantity of string attached to his body and it is supposed that he had descended from the heights during the night to find a weak spot in the British encampment, the object of the string being apparently to signal to his companions where and when to make the rush.

The country of the Afridis is very mountainous and in some places almost impassable. The engineers, however, worked with so much will that the making of roads was only a question of time. On one occasion it took three hours to travel half a mile with the transport and on another ten hours to go four miles. Some parts of the country were found to be fertile and cultivated and the inhabitants, who were very industrious, understood agriculture and irrigation. In these places cherry, walnut, and apple trees grew in abundance. In some cases the hard rock was cut into terraces upon which were grown corn, barley, and rice. As was stated by the lecturer in his opening remarks the Afridis are very expert marksmen. Among the wounded were found wounds from almost every kind of sporting rifle and also from rifles of the best modern make. Of Dum-Dum bullets the enemy had a plentiful supply and in one of their raids they managed to capture 13,000 rounds. The number of wounds from this latter kind of bullet numbered many hundreds. The Afridis prefer the rifle, but have, however, an old-fashioned mounted gun called a jazail, which will fire anything, from stones, slugs, and pieces of telegraph wire to soldiers' buttons. Of this latter curious kind of ammunition it was no infrequent thing to receive a charge through the tents at night. Transport of the wounded was a very difficult matter owing to the ruggedness of the country and in crossing swollen mountain streams the occupants of the stretchers were sometimes precipitated into the water. The native mule-drivers in charge of the transport frequently deserted. The food was good but it was often impossible for the men to venture from under shelter to get it on account of Afridi sharpshooters.

Major Beevor concluded his remarks with a testimonial to the Sikhs, who, he said, were the finest men in the world and possessed excellent manners.

At the Camera Club on Nov. 28th Major Beevor will give an account of the use of the x rays in the field during the same campaign.

MUNICIPAL HONOURS AND THE MEDICAL PROFESSION.

WITHIN the last few years an increasing interest has been taken by the profession throughout the country in municipal affairs, and we venture to think that the corporations which have elected medical men as their mayors, while honouring the individuals, have done a good stroke for themselves in availing themselves of technical knowledge which is sure to be of the highest use. To emphasise this point let us review the usual committees in an average provincial corporation. There are the Watch, the Finance, the Works, the Sewage Outfalls, the Burial Board, the Waterworks, the Health, the School Attendance, the Lighting, the Technical Education, and in some towns we find a special committee for "the Housing of the Working Classes" as well as a Railway and Parks Committee. In at least six out of the first ten enumerated the services of the medical profession are eminently appropriate, while in one particular instance—that of the Health Committee—all will allow that there should always be at least one medical member on it. To be sure that this is so we have only to recall the work of a Health Committee the duties of which consist in carrying out the provisions of the Food and Drugs Act, the Public Health Acts, the Factory and Workshop Acts, the Contagious Diseases (Animals) Act, the control of a sanatorium or isolation hospital, of indoor and outdoor baths, of public abattoirs—in fact, the general sanitary supervision of the borough. When the control of sanitary matters is delegated to representatives of various trades and commercial enterprises, the presence of a medical man on a Health Committee must contribute to strengthen the position of the medical officer of health, while it will act as a wholesome stimulus in the matter of local sanitary inspection. The chief difficulty in the way of the active practitioner is the time required to perform the duties of a town councillor, but that an increasing number of gentlemen do not allow this to constitute a drawback to their participation in civic duties is seen by the list which we append of medical men who have during the past few days been elected to the office of mayor. The list is possibly not complete, as at the time of going to press full returns have not been received, but as it stands it constitutes a record:—

Carnarvon: Mr. Robert Parry, M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. (re-elected). Chester: Mr. Henry Stolterfoth, M.A. Cantab., M.D. Edin. Conway: Mr. Morgan J. Morgan, L.R.C.P., L.R.C.S. Edin. Cowbridge: Mr. Richard Moynan, M.D., M.Ch. R.U.I. Coventry: Mr. T.

Webb Fowler, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. (re-elected). Darwen: Mr. J. T. Ballantyne, M.B., C.M. Glasg. Eccles: Mr. W. Moffett Hamilton, M.D., M.Ch. R.U.I., Dip. State Med. R.C.P.S.I. Harrogate: Mr. Ernest Solly, M.B. Lond., F.R.C.S. Eng., L.R.C.P. Lond., L.S.A., D.P.H. Eng. Hedon: Mr. James Soutter, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. (re-elected). Henley-on-Thames: Mr. James Lidderdale, M.R.C.S. Eng., L.S.A. (re-elected). Kingston-on-Thames: Mr. W. E. St. Lawrence Finny, M.B., M.Ch. R.U.I. Llandovery: Mr. R. Jeffreys Owen, L.R.C.P. Lond., M.R.C.S. Eng. Oswestry: Mr. William Alma Aylmer Lewis, L.R.C.P., F.R.C.S. Edin. (re-elected). Saltash: Mr. Robert T. Meadows, M.D., M.B., C.M. Edin., D.P.H. Eng. Conj. (re-elected). Ruthin: Mr. J. Medwyn Hughes, M.B., C.M. Edin. (re-elected). Totnes: Mr. G. J. Gibson, M.D., M.Ch. R.U.I. Winchelsea: Mr. Ernest W. Skinner, M.D., M.B., C.M. Edin. Worthing: Mr. Frank Parish, L.R C.P. Edin., M.R.C.S. Eng.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6695 births and 3663 deaths were registered during the week ending Nov. 5th. The annual rate of mortality in these towns, which had declined in the eight preceding weeks from 24·6 to 17·9 per 1000, further fell last week to 17·0. In London the rate was 16·1 per 1000, while it averaged 17·6 in the thirty-two provincial towns. The lowest death-rates in these towns were 6·7 in Croydon, 10·4 in Derby, 12·2 in Huddersfield, and 13·0 in Bristol; the highest rates were 20·7 in Blackburn, 21·3 in Salford, 21·7 in Manchester, and 22·2 in Liverpool. The 3662 deaths in these towns included 420 which were referred to the principal zymotic diseases, against 538 and 455 in the two preceding weeks; of these, 123 resulted from diarrhœa, 91 from "fever" (principally enteric), 69 from diphtheria, 68 from measles, 43 from scarlet fever, and 26 from whooping-cough. No fatal case of any of these diseases occurred last week in Croydon; in the other towns the lowest zymotic death-rates were recorded in Brighton, Cardiff, Birmingham, and Bolton, and the highest rates in Portsmouth, Swansea, Wolverhampton, and Norwich. The greatest mortality from measles occurred in Portsmouth, Plymouth, Norwich, Nottingham, and Sunderland; from scarlet fever in Norwich; from whooping-cough in Halifax; from "fever" in Sheffield and Huddersfield; and from diarrhœa in Plymouth, Wolverhampton, Leicester, and Preston. The 69 deaths from diphtheria included 28 in London, 8 in West Ham, 7 in Swansea, 5 in Portsmouth, 5 in Liverpool, 4 in Leeds, and 4 in Sheffield. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment during the week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Nov. 5th, was 3092, against 2728, 2915, and 3032 at the end of the three preceding weeks; 318 new cases were admitted during the week, against 357, 331, and 336 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 263 in each of the two preceding weeks, declined to 237 last week, and were 147 below the corrected average. The causes of 46, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Salford, Leeds, Hull, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Burnley, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·0 and 20·0 per 1000 in the two preceding weeks, declined again to 18·9 during the week ending Nov. 5th, but exceeded by 1·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·4 in Dundee and 17·9 in Glasgow to 22·2 in Aberdeen and 28·9 in Perth. The 571 deaths in these towns included 32 which were referred to diarrhœa, 18 to "fever," 10 to diphtheria, 7 to measles, 7 to whooping-cough, and 6 to scarlet fever. In all, 80 deaths resulted from these principal zymotic diseases, against 86 and 73 in the two preceding weeks. These 80 deaths were equal to an annual rate of 2·7 per 1000, which was 0·7 above the mean rate last week from the same diseases in the thirty-three large English towns. The deaths referred to different forms of "fever," which had been 9 and 15 in the two preceding weeks, further rose to 18 last week, of which 11 occurred in Glasgow, 2 in Edinburgh, 2 in Paisley, and 2 in Greenock. The fatal cases of diphtheria, which had been 6 and 8 in the two preceding weeks, further increased to 10 last week, of which 5 were recorded in Glasgow. The 7 deaths from whooping-cough were within one of the number in the preceding week, and included 4 in Glasgow and 2 in Dundee. The fatal cases of scarlet fever, which had declined from 14 to 4 in the four preceding weeks, rose again to 6 last week, of which 3 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 120 and 119 in the two preceding weeks, rose to 126 last week, but were 16 below the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the four preceding weeks from 22·1 to 26·4 per 1000, declined to 24·8 during the week ending Nov. 5th. During the past four weeks the rate of mortality in the city has averaged 25·5 per 1000, the rate during the same period being 17·1 in London and 18·9 in Edinburgh. The 166 deaths registered in Dublin during the week under notice showed a decline of 11 from the number in the preceding week, and included 18 which were referred to the principal zymotic diseases, against 20 and 13 in the two preceding weeks; of these, 6 resulted from diarrhœa, 3 from diphtheria, 3 from whooping-cough, 3 from "fever," 2 from scarlet fever, and one from measles. These 18 deaths were equal to an annual rate of 2·7 per 1000, the zymotic death-rate during the same period being 1·6 in London and 3·2 in Edinburgh. The deaths referred to "fever," which had been 4 in each of the two preceding weeks, were 3 last week. The 3 fatal cases of diphtheria corresponded with the number recorded in the preceding week. The deaths from whooping-cough, which had been 7 and 1 in the two preceding weeks, rose again to 3 last week. The mortality from scarlet fever and from measles also exceeded that recorded in the preceding week. The 166 deaths in Dublin last week included 42 of infants under one year of age, and 43 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons showed a decline from the number in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 52, or nearly a third, of the deaths occurred in public institutions. The causes of 16, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are announced:—Surgeons: George E. Glynn to the *Galatea*; Francis F. Lobb to the *Alexandra*; Harold J. Chater to the *Colossus*; Herbert W. B. Shewell to the *Rodney*; George E. Macleod to the *Benbow*; Ernest S. Reid to the *Collingwood*; Harry E. Raper to the *Trafalgar*; Frederick C. B. Gittings to the *Nile*; and Alan G. Eastment to the *Howe*.

ROYAL ARMY MEDICAL CORPS.

Major W. R. Crooke-Lawless, the Royal Army Medical Corps, from Surgeon-Major, Scots Guards, to be Surgeon-Major, Coldstream Guards, vice Major W. C. Beevor, the Royal Army Medical Corps, who exchanges. Major W. C. Beevor, the Royal Army Medical Corps, from Surgeon-Major, Coldstream Guards, to be Surgeon-Major, Scots Guards, vice Major W. R. Crooke-Lawless, the Royal Army Medical Corps,

who exchanges. Lieutenant-Colonel J. Fraser, to be Colonel, vice W. D. Wilson, promoted.

Major Wilkinson embarks for India. Lieutenant-Colonel Keays, Major Yourdi, and Lieutenant Bowen are posted to the Punjab, Madras, and Bengal Commands. Captain Copeland is posted to the Western Heights, Dover. Major Phipps assumes Medical Charge at Warley, vice Major Morse, under orders for India. Major Thompson embarks for India.

Army Medical Reserve of Officers.

Surgeon-Lieutenant David James Lawson, 1st Dorsetshire Volunteer Artillery, to be Surgeon-Lieutenant.

Volunteer Corps.

Artillery: 3rd Durham (Western Division, Royal Artillery): James Henry Hunter to be Surgeon-Lieutenant. *Rifle:* 1st Roxburgh and Selkirk (the Border): Surgeon-Major J. S. Muir to be Surgeon-Lieutenant-Colonel. 3rd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant E. Morton resigns his commission.

Volunteer Officers' Decoration.

The Queen has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force. *Eastern District: Rifle:* 1st Volunteer Battalion the Suffolk Regiment: Surgeon-Major Maurice Edward Ling. *Home District: Rifle:* 1st Bucks Volunteer Rifle Corps: Brigade-Surgeon-Lieutenant-Colonel William Henry Bull. *North-Western District: Rifle:* 3rd Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Major Frederick Flood Moore, retired. 4th Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant-Colonel William Somerville Limrick. *Scottish District: Rifle:* 1st Roxburgh and Selkirk (the Border) Volunteer Rifle Corps: Brigade-Surgeon-Lieutenant-Colonel George Hogarth Turnbull.

Lord Kitchener of Khartoum.

It goes without saying that the nation and the army alike are gratified that the Queen has been pleased to confer the dignity of a peerage upon Major-General Sir H. Kitchener, Sirdar of the Egyptian army, under the style and title of Baron Kitchener of Khartoum and of Aspall in the county of Suffolk. There is no need to dwell upon the great services, military and political, which he has rendered, for they are fresh in the recollection of all. It is somewhat rare, however, for a successful general to exhibit such qualities of statesmanlike tact and judgment under trying circumstances as Lord Kitchener has done. We may add that the medical services are among the foremost in their congratulations, for they are proud of the highly appreciative terms in which their work has been recognised on the occasion of the recent arduous campaign in the Soudan. We are glad to learn that the strain upon the military hospitals of Egypt has been much diminished, owing to the number of sick and wounded from Atbara and Omdurman having greatly decreased.

The Director-General of the Indian Medical Service and Sanitary Commissioner with the Government of India.

We are glad to congratulate Surgeon-General Harvey, C.B., on his appointment to the above posts in succession to Surgeon-General Cleghorn, C.S.I., retired. Surgeon-General Harvey has had a long and varied experience in India in both the civil and military branches of his service and has gained much distinction and reputation in both directions. He joined the Indian Army March 31st, 1865. His war service includes the Bhootan expedition, 1865–66 (medal with clasp); the Loosbai expedition, 1871–72 (mentioned in despatches, clasp); the Miranzai, first and second expeditions, 1892, as P.M.O. (mentioned in despatches, clasp and D.S.O.); the Hazara expedition, 1891, as P.M.O. (clasp); and the Izazai expedition, 1892, as P.M.O.

The Subordinate Medical Department in India.

We are glad to notice that the Secretary of State for India has sanctioned the proposals of the Indian Government for improving the position of assistant surgeons of this very deserving and useful department. The subordinate medical service will in future be divided into four classes on Rs. 85, 110, 150, and 200 respectively, the existing class on Rs. 60 being abolished. Promotion will be given after certain fixed periods of service, the highest class being attained after nineteen years, instead of the present average of twenty-four years' service.

Deaths in the Services.

Brigade-Surgeon Frederick Pennington, at Lugano, in his sixty-ninth year. He entered the army in 1858 and retired in 1885. He was engaged in the operations against the rebels in Oude in 1858–59 (medal) and served in the Ashanti war of 1873–74 (medal). He also served in the Egyptian War of 1882 (medal and Khedive's Star).

"The Titles of Retired Army Medical Officers."

In our paragraph under this heading in our last issue suggesting that the Royal Army Medical Corps titles should be conferred upon the retired members of the Army Medical Service our meaning is somewhat altered by an obvious printer's error. The word "but" at the end of the third line should, of course, be *non*.

Colonel Sloggett, R.A.M.C.

This officer is to be greatly congratulated on having made such a rapid and apparently complete recovery from the serious gunshot wound of the chest which he sustained at the battle of Omdurman.

Army Medical School, Netley.

On the departure for India of Professor Wright, Captain W. B. Leishman, R.A.M.C., will join the Army Medical School as Assistant Professor of Pathology.

Correspondence.

"Audi alteram partem."

THE EASTBOURNE PROVIDENT MEDICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—As you have taken an interest in the Eastbourne Provident Medical Association since its formation three years ago[1] you may be glad to hear something of its present position. The association does not print an annual report, but this letter includes all the important features of the report read at the annual meeting recently held. The association has completed the third year of its existence. Its membership now amounts to 5338. This is an increase of 1185 on last year's numbers. The population of Eastbourne is something under 44,000. We have had our acting medical staff still further strengthened this year by the addition to it of three old-established practitioners who hitherto have constituted the staff of the old Provident Dispensary. Between 700 and 800 members of that dispensary have followed their medical advisers and have become members of the Provident Medical Association. The income of the association for the past year has been £877 3*s.* 3*d.*, derived solely from members' payments and the payments for membership cards. On account of it having become necessary to employ a paid assistant-secretary the working expenses have been increased. The amount deducted for these expenses during the year has been 17½ per cent. of the income. The balance remaining goes directly to the medical staff. No complaints connected with the working of the association have been brought to the honorary secretary's notice during the year.

The most important event of the year is the addition to our acting medical staff of the whole of the medical staff of the old Eastbourne Provident Dispensary, which came about thus. In March last these three gentlemen received letters from the committee of the Provident Dispensary giving them notice that their appointments as medical officers to the dispensary would terminate at midsummer. The reason given them was that on account of the "considerable and continued diminution of the number of members of the dispensary in recent years" the committee considered "a revision of the remuneration of the medical officers was advisable." No opportunity was given to these gentlemen to continue as the dispensary medical officers even under "revised" salaries, although in their report issued only a month previously the committee had offered "their best thanks to the medical officers

[1] THE LANCET, Oct. 5th, 1895.

for their attention to the patients." On the contrary, the Dispensary Committee approached other medical men in the town with a view to their appointment to the dispensary in succession to the late staff. In the meantime the old staff of the Provident Dispensary applied for admission and were unanimously elected to the staff of the Provident Medical Association. During the month of June two medical men were found in Eastbourne who were willing to fill the vacancies caused by the dismissal of the staff of the Provident Dispensary. One of these two was at the time on the staff of the Provident Association, but he, of course, resigned on accepting the dispensary appointment. Our committee heard of this gentleman's action with the greatest regret and not a little surprise, for from the inception of the association our committee, while wishing to deal fairly with the Provident Dispensary, have always felt that it was conducted on lines which they could not approve. And yet these two gentlemen were willing to accept appointments under an institution worked on principles directly contrary to those which, after prolonged and careful consideration, the profession in Eastbourne had adopted as the only satisfactory lines upon which the medical treatment of the poor could be conducted (vide THE LANCET, July 27th, 1895).

The virtual dismissal of the Provident Dispensary staff forcibly illustrates the truth of the opinion of the association that it should not be possible for medical practitioners to be suddenly severed from their patients—even from those of the humbler classes—at the will of a committee composed mainly, if not entirely, of laymen. The remedy lies in the adoption of the principles of the Eastbourne Provident Medical Association, and the best evidence of the soundness of these principles is the steady growth in the number of our members. I may, in closing, mention that our methods have been adopted in New South Wales, where the Sydney and Suburban Provident Medical Association has been started, and has, I am informed, attained, in spite of considerable difficulties, "a creditable degree of efficiency."

I am, Sirs, yours faithfully,

ALEX. HARPER, M.D. Durh.,
Hon. Sec. Eastbourne Provident Medical Association.

Eastbourne, Nov. 8th, 1898.

THE ASSOCIATION OF PUBLIC VACCINATORS.

To the Editors of THE LANCET.

SIRS,—A general meeting of the Association of Public Vaccinators was held on Nov. 1st, in the offices of the Medical Defence Union, 4, Trafalgar-square, Mr. Greenwood, Public Vaccinator for Marylebone and President of the association, in the chair, for the consideration of the new vaccination order of the Local Government Board. The meeting, which was largely attended, included representatives from all parts of England and Wales.

The following recommendations have been communicated to all members of the association:—

1. That the fee to be applied for under Article 3, paragraph (*a*), of the order should be 2*s*. 6*d*. It was pointed out that this fee was in no real sense a fee on the birth-rate, since the number of births in which it is to be assessed is subject to such extensive deductions; and, again, that in every case in which the fee is payable at least one visit to the home of the child will be necessary.
2. That the fees provided for successful vaccination and revaccination at homes or elsewhere by Article (3), paragraphs (*b*) and (*c*) be accepted as a minimum.
3. That mileage be allowed for at the rate of one shilling per mile or part of a mile, one way, for distances greater than two miles from the public vaccinator's residence, for each statutory visit paid.

We trust that public vaccinators generally will take note of these suggestions in approaching their various boards of guardians. Any public vaccinators who have not yet joined the association may obtain particulars from either of us.

We are, Sirs, yours faithfully,

VICTOR A. JAYNES (157, Jamaica-road, S.E.),
ALBERT E. COPE (26, Bessborough-gardens, S.W.),
Nov. 9th, 1898. Honorary Secretaries.

"THE VACCINATION ORDER, 1898."

To the Editors of THE LANCET.

SIRS,—In your excellent article on the New Vaccination Order of the Local Government Board in your last issue there are one or two points you have not commented on, on which I should be grateful to you for an expression of your opinion.

In Schedule 1 (6) is the attendance on the child sick from vaccination to be paid for by the parents or is it to be given at the public vaccinator's expense? If in the first case the paragraph is unnecessary, if in the second it greatly increases the public vaccinator's responsibility, and should be considered in his remuneration. Again, it will frequently happen that both parents will be away when the public vaccinator calls, on the vaccination officer's order, and if he vaccinates, having only the consent of a child or other person in charge of the infant, would he be liable to be convicted for assault? And is the grant for successful vaccination now abolished?

I am, Sirs, yours faithfully,

Beckington, Bath, Nov. 6th, 1898. W. G. EVANS.

*** (*a*) The treatment by a public vaccinator of a child vaccinated by him and who, in his opinion, is suffering "in consequence of the vaccination," is to be carried out at the public vaccinator's expense. This requirement does not really increase the public vaccinator's responsibility. In all vaccination contracts hitherto the public vaccinator has always undertaken "to do all such acts and things to the best of his judgment" as "shall seem necessary for the purpose of causing such vaccination to be successfully terminated." This has always included advice, &c., for any ailment in consequence of vaccination; and the only difference is that whereas such advice and action is, under the existing system, probably limited to occasions when the suffering child is brought to the station, they must hereafter be given at the home of the child. Account of this in the case of these rare incidents was taken when the minimum fee of 1*s*. 6*d*. for stational vaccination was altered to 6*s*.; the latter being also a minimum. (*b*) If the public vaccinator has given notice to the parents as to the date of his intended visit, as required under the general order, it will devolve on the parents to make such arrangements as are necessary for the child to be vaccinated if they are away. The public vaccinator will have no further duty if the child is not available when he calls at the date specified.—ED. L.

THE STATE SERVICE IN ST. PAUL'S CATHEDRAL.

To the Editors of THE LANCET.

SIRS,—There is a growing conviction among medical men that the service in state yearly organised by the Guild of St. Luke in St. Paul's Cathedral possesses many highly objectionable features and tends decidedly to lower the profession in the eyes of the intelligent. To prove this latter contention the general tone of the notices of the function in the lay journals is sufficient, and if the members of the Guild were not so very thick-skinned these notices would themselves be sufficient to deter them from repeating their annual display.

Unlike some other professions, that of medicine has never been given to show. A public muster of members in gorgeous attire is in itself an innovation requiring some justification, but the matter becomes much more serious when we remember that this display is preceded by preliminary puffs in nearly all the lay papers, evidently inspired, wherein certain names are given, and that notices of the function are inserted in most lay and religious papers, names being again introduced. What is this but advertisement? Yes—advertisement of a most insidious and reprehensible character, for not only do those whose names appear advertise their persons and occupations, but they also contrive to establish in the minds of the weaker sort a reputation for piety. The Guild cannot in reason plead religious enthusiasm in mitigation of their offence; for the Founder of Christianity, whose followers they profess to be, has sternly forbidden any such display. In His Sermon on the Mount, Mat. vi., 5 and 6, occur these words: "And when thou prayest, thou shalt not be as the hypocrites are: for they love to pray standing in the synagogues and in the corners of the streets, that they may be seen of men. Verily I say unto you, they have their

reward. But thou, when thou prayest, enter into thy closet, and when thou hast shut thy door, pray to thy Father which is in secret; and thy Father which seeth in secret shall reward thee openly."

I am, Sirs, yours faithfully,

Bowes Park, N., Nov. 7th, 1898. ANGUS CAMPBELL.

"THE WATER TEST AS APPLIED TO SEWER CONNEXIONS."

To the Editors of THE LANCET.

SIRS,—I have read with interest the letter in THE LANCET of Oct. 29th by Mr. J. W. Mayne on the above subject. I quite agree with him that the connecting drain to the sewer is often carried out in an unsatisfactory and slipshod manner, but I do not quite understand Mr. Mayne's difficulty. Why should he not test the connexion put in by the local authorities himself? It can easily be done and without very much trouble, and if found leaky and defective, as he seems to think it would be, surely he can compel the persons who have done the work and charged him for it to make it good. I make a point of testing all sewer connexions three or four days after they are executed, and this has been done in a connexion made last year from a large hospital in Mr. Mayne's own district (Wimbledon).

In London, where there are often large brick sewers, the thing is simple enough—to plug the drain from the sewer in the ordinary way, seeing that the plug is secure and water-tight, and then test. I may say that I have always found the authorities willing and ready to help me in this matter. Only this week on a very large drainage work I am carrying out at the Incorporated Law Society in Chancery-lane I have had three separate connexions made with the sewer (which are under the jurisdiction of two distinct authorities) and tested in the above manner, although it was necessary to walk a great distance up the sewer in order to get at the connexions to see that they were effectually plugged, and these plugs were in the drain while it was filled with water for 24 hours and three days after the work was executed.

For small pipe sewers of course this method is not possible, so I have the connexions tested by means of one of the inflated bag plugs. The distance to the sewer can easily be ascertained and the bag pushed down the connecting drain nearly to the inlet to the sewer and then inflated by means of the rubber tubing (the bag should be held also by means of a cord), the drain then tested by water, and afterwards the bag emptied and withdrawn. I have no doubt whatever that, as Mr. Mayne states, many miles of defective connexion to sewers are laid and are a source of great danger, but this might, I think, be largely overcome if proper professional supervisors were employed who would insist on seeing that the work was carried out in an effectual manner.—I remain, Sirs, yours faithfully,

H. PERCY ADAMS, F.R.I.B.A.

Woburn-place, W.C., Nov. 4th, 1898.

To the Editors of THE LANCET.

SIRS,—Mr. Mayne's letter in THE LANCET of Oct. 29th impels me to give a recent experience. A relative of mine was taking a house in a London suburb. By my advice the agreement was not signed until the drains had been tested. They were exposed in the garden as far as the street; the smoke test was applied; smoke issued from every joint without exception. As usual the joints had been cemented in front but not behind (out of sight). This is an old story, but it needs repetition. My friends would have "backed their luck" unless I had been urgent with them, although, strange to say, their drinking-water is taken from a well in the garden and the drain-pipe passes within 8 ft. of it.

I am, Sirs, yours faithfully,

Nov. 7th, 1898. T. C.

INVERSION OF UTERUS CAUSED BY A "MIDWIFE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 22nd I notice an annotation headed "Midwives and the Deaths of Children." I think that the following facts will confirm the opinion expressed that the mothers' and the children's lives are sacrificed by the absence of proper medical attendance.

Not many weeks ago I was called to see a midwifery case; the message was that "the midwife could not manage." On arrival at 4 A.M. I found that the patient had been delivered of a female child at 3 A.M. by an "uncertificated midwife." The patient was dead, lying on the bed in the obstetric position, and on examining the body I found the following state of things. The uterus was entirely inverted, the whole of the uterus lying on the sheet under the patient, only the broad ligaments remaining in the vagina. The placenta was attached to the fundus of the uterus and had been adherent, but two-thirds of the placenta were separated from the placental site, no doubt due to force employed by the midwife; the remaining third I peeled off and returned the inverted uterus into position. There had been considerable hæmorrhage. On questioning the "midwife" she told me that she was called to the deceased at 7 o'clock on the previous evening and that the labour pains were irregular and often at fifteen minutes' interval, that the child came naturally, but when "she went to get the placenta," repeating her own words, the deceased bore down and that it all came at once. The deceased was an anæmic woman in poor circumstances, and this was her second child. The so-called "midwife" stated at the inquest the same as she told me, that she had attended cases for seventeen years and never had a fatal case or one with any serious complications before, and that she had had no training except what she had learnt from her own experience. The coroner severely censured the "midwife" and told her that she would in attending cases do so at her own risk. There can be no doubt, as I stated at the inquest, that the "midwife" made traction on the cord and that the placenta being adherent to the fundus caused the inversion; but the inversion was caused by the ignorance on the part of the midwife and thus brought about a fatal result.

When one reads of cases in THE LANCET of certificated midwives giving ergot before the delivery of the child and then has such a case as this one it impresses the fact more clearly that the sooner these so-called "midwives" are registered and act under proper medical advice one will not see such a lamentable result as the foregoing.

I am, Sirs, yours faithfully,

RICHARD G. WORGER, M.R.C.S. Eng.

Radstock, Somerset, Nov. 1st, 1898.

THE DIPLOMA IN SANITARY SCIENCE OF THE ROYAL UNIVERSITY OF IRELAND.

To the Editors of THE LANCET.

SIRS,—I have once before in the medical press called the attention of the Senators of the Royal University of Ireland to the absurdity of continuing to offer to its medical graduates a qualification which is called "Diploma in Sanitary Science" to candidates passing a qualifying examination in a number of subjects similar to those specified for the D.P.H. Cambridge, or D.P.H. London conjoint colleges examinations. The title of the diploma too nearly resembles that of a qualification such as is usually given to a sanitary inspector. Is a man going to spend six or twelve months in close study and laboratory work to be rewarded with a mere Diploma in Sanitary Science? Evidently the medical graduates of the Royal University of Ireland think such a prize is not worth seeking, for on looking through the University Calendars I find such a diploma offered annually for the last seven years or so, but no record is to be found of anyone having obtained this qualification. Its graduates have to go to other licensing bodies and universities for their Diplomas in Public Health. There is no difficulty in seeing that the fault lies in the name of the diploma this University offers. Therefore I address myself to the Senators of this University through the medium of THE LANCET to remedy the title of the diploma they offer in the special branch of Public Health. And I would venture to suggest (1) either that the name of the diploma be changed to D.P.H. R.U.I., or (2) preferably, as in the University of Edinburgh, that they give after proper examination a B.Sc. (Hygiene). I feel sure if either change be made there will be many graduates going up for the special Diploma in Public Health instead of as at present.—I am, Sirs, yours faithfully,

CHARLES LEO BIRMINGHAM, M.D. R.U.I.

Highgreen, Yorkshire, Nov. 4th, 1898.

THE OXFORD MEDICAL MISSION.

To the Editors of THE LANCET.

SIRS,—Your annotation in THE LANCET of Nov. 5th, entitled "The Abuse of Medical Charities," conveys an

erroneous impression of the Oxford Medical Mission. This is one of the branches of the Church in Bermondsey and its object is the special care of the sick and dying among the poorest classes. Complaint was made at the inquest referred to that patients were treated at the Mission without regard to their circumstances. This is not true. Inquiry is always made and patients are daily refused. I have made special inquiry about the child referred to. I learn that the mother was wholly without means and was supported by friends while looking for work. The child was only seen once at the mission house. It was brought again when none of the medical staff were present and the mother appears to have been referred by the clergyman to the nearest practitioner. I may say that in any case you cannot call this an "abuse" of a medical charity, seeing that the funds are almost wholly provided by the secretary and a few Oxford men who know perfectly well how their money is used. When the Mission was started last winter I called on a number of the local medical men and said we were most anxious not to interfere with their practice and that if ever they pointed out to us a case of undeserved treatment we would stop it at once. We have had no complaint and one leading medical man has given us most valuable help.

I am, Sirs, yours truly,

JOHN STANSFELD, M.A. Oxon., M.R.C.S. Eng.,
Nov. 9th, 1898. L.R.C.P. Lond.

"THE LANCET ANALYTICAL COMMISSION ON SHERRY: ITS PRODUCTION, COMPOSITION, AND CHARACTER."

To the Editors of THE LANCET.

SIRS,—We read in THE LANCET of Nov. 5th a letter from Dr. H. Howard Murphy respecting your very able article on the above-named subject. Dr. Murphy says that having questioned several friends "in the trade" he is assured that the blending of sherry is essential and universal, and that the blending consists of adding water, spirits, curaçoa, burnt sugar, &c. How any members of our trade can have made such a statement as this surpasses our understanding, for, speaking with many years' experience, we are in a position to say that Dr. Murphy has been grossly misled.

We are sherry shippers and have the pleasure of shipping Jerez wine—sherry such as described by your Commissioner—to many of the leading wine merchants in the United Kingdom, firms old-established and of the highest integrity, and we shall be pleased to put Dr. Murphy in communication with any of them he may wish, when we are certain they will to his satisfaction prove the sherry that they import is supplied to the public exactly as they receive it and that in the vast majority of cases it is bottled straight from the cask in which it is imported. Different vintages of sherry are blended together in Spain but not in England; blending of this kind, however, is a very different thing to the mixing of wine with the ingredients named by Dr. Murphy's informants.

We trust that Dr. Murphy will investigate the matter further, when we are convinced that he will be satisfied that he can with every confidence recommend the wine, upon which we are, indeed, glad to see you have been able to report so favourably.

We are, Sirs, yours faithfully,

WILLIAMS AND HUMBERT.

17, Mincing-lane, E.C., Nov. 7th, 1898.

P.S.—We take this opportunity of pointing out, also, that in a paragraph in the *St. James's Gazette* of Nov. 3rd it is stated that fine sherries are not to be obtained at a price which brings them within the reach of all and that fiery blends coming *viâ* Hamburg take the place of choice dinner sherry. This is not so. Genuine and good sherry is now cheap and the most humble cellar could contain a small stock, and, moreover, Cadiz wine is now lower in price than any blend coming from Hamburg; so that there could be no object in importing from that port. We have the best authority for saying that the amount of white wine now coming from Hamburg to the United Kingdom is infinitesimal.

THE MOSQUITO AND DRINKING WATER.

To the Editors of THE LANCET.

SIRS,—Is it advisable to allow the mosquito to have access to drinking water? In view of recent research work I should certainly think not. And when the water-supply is in the vicinity of dwellings the recent work connecting the mosquito with malaria appears to discountenance such a proceeding. But apparently this view of the matter is not accepted by all tropical practitioners, for I know at least one gentleman who advocates that mosquitoes should be encouraged to breed in water-supply, on the ground that by devouring any organic matter which may be present the larvæ purify the water. I am, Sirs, yours faithfully,

Nov. 5th, 1898. C. H. E.

THE GENERAL MEDICAL COUNCIL AND THE UNQUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—Am I mistaken or is it really the case that in spite of its regulations the General Medical Council will not take the initiative in enforcing their observance? I am informed that any grievance which one practitioner may have against another in the matter of unqualified assistants will receive no attention if reported to the Council. Or, to be plainer, the Council will simply act as a tribunal before which a case of the kind may be brought, but the conduct of the case and the expenses thereof are left to the complainant. The Pharmaceutical Society protects those whom it registers and on information investigates and prosecutes offenders. Surely registered medical men merit the same protection from the General Medical Council. It is a very unpleasant thing for a man to have to act as his own policeman. Often among a number of medical men in a small town only one of them will be at all injured by another keeping an unqualified assistant. For two reasons he has to quietly submit to this unfair opposition. First, informing the General Medical Council privately is of no use; he must occupy the invidious position of prosecutor. Secondly, were he willing to do this the expense is prohibitive. The result of this is that the Council's late regulation is set at defiance by all who think they can do so safely.

In my own case one of my opponents employs and sends round visiting patients in my district an unqualified man. I am obliged to put up with it or render myself odious to those among whom my opponent and his assistant are popular by acting as his prosecutor. Were the General Medical Council ready to take the initiative on my positive information my path would be perfectly smooth, as, though I am the only man affected by this breach of the regulations, there are others who for aught the public know might be the informants. I also know of another case in which a personal friend of my own is acting as unqualified assistant to a practitioner who has a lucrative practice as well as private means. His salary is £30 a year and time for attending classes. Only last month appeared an advertisement for a surgery attendant "able to ride and cycle." What does that mean? Simply an unqualified assistant and the setting at defiance of the Council's regulations. The unqualified assistant would disappear entirely and a great injustice to medical men in a small way of practice be removed if the Council would do its rightful duty and enforce the observance of its laws with its own hand.

I am, Sirs, yours faithfully,

Nov. 7th, 1898. JUSTICE.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Commission.—Rabies in India.—Madras and its Plague Measures.—The Progress of the Plague.—The New Plague Regulations.—The English Plague Nurses.

THERE is plenty of work for the Plague Commission—the only regret is that it was not appointed sooner. The immense quantity of plague literature which has been accumulated consists for the most part of official reports and from a medical point of view is of little value. It is said that the Commission will deal chiefly with the origins of the different outbreaks, the manner in which the disease is communicated, and the effects of curative serum and preventive inoculation. It is to be hoped that it will collect evidence from unofficial and independent persons. The two civil officers of Indian experience are Mr. J. P. Hewett, secretary to the Government of India Home Department, and Mr. A. Cumine, I.C.S. The names of the medical members have not yet been published here. Mr. C. T. Halifax, Deputy Commissioner, Lahore, has been selected for appointment as secretary.

Almost every week some European is bitten by a rabid dog

and travels to Paris for treatment at the Pasteur Institute. Now five soldiers have just been sent. Rabies is rife in nearly all parts of India and these accidents are constantly occurring, yet the establishment of an institute for India is treated with indifference and the anti-vivisectionists are active and take every opportunity to vilify the work of Pasteur and his successors.

Different Presidencies adopt different plague measures. For Madras the Government have declared its willingness to contribute towards the cost of erecting private plague hospitals while leaving the internal management to certain native practitioners who enjoy the confidence of the people. The Government will pay half the cost of construction and half the cost of maintenance, provided the arrangements meet with the approval of the local medical officers, the collector, or the president of the municipality. How different all this is from the regulations made in the Bombay Presidency. Although Madras city has had for some time an excessively high death-rate the authorities indignantly deny that it is due to unrecognised or concealed cases of plague, but it is admitted that the sanitary state of the city is very bad. In some districts there are few or no drains, crowding is excessive, and an enormous waste of water keeps the subsoil perpetually damp. It is said that cholera has been more prevalent than has been reported and that there has been an increase of population by immigration from certain distressed districts. The system of registration of the causes of death seems to be as bad as in Bombay. It is dependent upon ignorant persons who cannot be expected to furnish correct returns. Anything that is not fever or cholera or dysentery will generally come under the head of "other diseases." Beyond the daily or weekly totals of deaths such returns are absolutely valueless.

The progress of the plague during the past fortnight has been irregular. While there has been an extraordinary interruption in its development in Bombay city it continues severely in the Dharwar, Belgaum, and Satara districts and in Bangalore city it is gaining ground rapidly. If the diminution of plague deaths in Bombay is due to the excessive heat of the past fortnight there is no hope for improvement with the onset of cooler weather. It cannot be due to the measures taken against the plague because now it is practically left to take its own untrammelled course. The Presidency plague returns for the past week show an increase in the number of attacks, but a slight decrease in the total of fatal cases. The numbers were 5803 attacks and 4311 deaths, as compared with 5637 attacks and 4394 deaths in the previous week:—

—	Cases.	Deaths.
Cities.		
Bombay	290	211
Karachi	61 (?)	61 (?)
Poona	2	0
Districts.		
Kaira	8	8
Broach	19	14
Surat	13	13
Thana	44	41
Nasik	198	105
Poona	106	63
Satara	670	486
Sholapur	76	21
Belgaum	1666	1150
Dharwar	1574	1273
Political agencies.		
Baroda	172	99
Kathiawar	109	86
Kolhapur	732	582
Cutch	46	36
Rewa Kantha	11	6
Pelanpur	—	1
Akalkot	12	10
Aundh	29	20
Bhor	71	52

The total from September, 1896, to October 14th, 1898, is 158,379 cases and 125,239 deaths.

The new plague regulations which were announced several weeks ago have at last been published. They concern chiefly the travelling public. The Government has now come to the conclusion that "as a permanent feature of epidemic regulations detention camps and passes are impossible. It is evident that it is impracticable over a large area and a prolonged period of time to close the ordinary channels of daily business and intercourse without very sorely trying the patience of the public and jeopardising general prosperity." This was pointed out in the press twelve months ago. Detention camps and passes will consequently be abolished. To replace detention camps and passes a very strict medical examination, accompanied by disinfection of clothing where necessary, will be instituted at convenient railway centres and at places of arrival. Persons coming from infected localities will also be subject to surveillance for ten days after arrival. Elaborately detailed instructions are publicly issued with regard to the examination of travellers. At each examining station the examination should be conducted in the same way as for passengers departing by sea from Bombay. For first- and second-class passengers and purdah ladies (!) the usual pulse examination will suffice. Does the Government imagine that such an examination is anything more than a farce? Plague cannot be detected by such means. Third-class passengers, except purdah ladies (!), must be required to detrain. There must be stationed women qualified to make the examination of travellers of the female sex. Whom do the Government recognise as qualified? There are certainly not lady doctors at all the examining stations and, as a matter of fact, a large part of the examinations are left to more or less trained nurses. There are, in addition, detailed rules with regard to the use of the thermometer, as if the Government had not confidence in its own medical officers. Persons travelling with certificates of inoculation will *ordinarily* be allowed to pass the examination prescribed for first- and second-class passengers except that they will probably be required to detrain and disinfection of clothing, bedding, and baggage, may be enforced. It is difficult to see what benefit inoculated persons derive from this rule. The same half-hearted support to inoculation is given in Bengal, where it is officially notified that the Government has ruled that persons inoculated by M. Haffkine's process, unless actually suffering from plague, shall be exempted from detention at plague observation camps in Bengal except for such period as may be required to disinfect baggage and clothes if they are considered suspicious. As detention camps will probably be abolished everywhere, as has just been notified for the Bombay Presidency, this concession to inoculated persons is of little value. It is evident that travelling is to be made as inconvenient and troublesome as possible. After having gone through the process of minute examination and perhaps disinfection of clothes the traveller will be given a ticket showing his identity. This will be operative for twenty-four hours. Even when he arrives at his destination he will still be subject to surveillance for ten days. When it is borne in mind that on an average one case of plague has been discovered amongst about 30,000 travellers some idea of the value of these elaborate regulations can be gathered. There is at any rate one new regulation of great importance. "No subordinate will be empowered to order detention or to decide as to the results of examination." The amount of blackmail which has been hitherto levied by subordinates has been at the root of a great deal of the ill-feeling created by the old regulations. As these new regulations were delayed in publication in order that the provisions might be discussed with the heads of the Government of India at Simla it may be assumed that what has been decided for the Bombay Presidency will ultimately be carried out in India wherever plague occurs in epidemic form. Up to the present time there has been no uniformity in the measures carried out and the measures have varied from extreme severity to practical uselessness. The Government have been compelled to modify and relax the regulations. It was imagined at first that elaborate and stern measures would eradicate the plague. It is only too clear that they have not. The plague will practically be allowed to take its own course, and it is hardly a prophecy to say that the new regulations with regard to travellers will have to be modified and relaxed at no very distant date. The movements of hundreds of thousands of people cannot be interfered with for an indefinite time.

Most of the English nurses who were sent out by the

Secretary of State for India have been asked by the Government of India to continue service for another year. Many have declined and have returned to England as soon as the term of their agreement was fulfilled. Several, however, have accepted the fresh agreement, which is somewhat different from the old. There is no increase of pay offered and there is no provision made for leave. Although it was found necessary to allow the nurses first-class travelling expenses in the Bombay Presidency this is not guaranteed, nor is the second-class return to England by the Peninsular and Oriental Steamship Company, as the Government reserve the option to themselves of paying the sum of 450 rupees instead. Service for one year is enforced on the nurse, but the Government can dispense with her services after six months. It is difficult to see what attraction these ladies see in these appointments to induce them to prolong their engagements. The work itself is unpleasant and sometimes arduous, and the pay is not so large as to make up for all other disadvantages. The novelty of Indian life and scenery when not changed soon passes off and from a professional point of view a year or two years at this kind of work must distinctly deteriorate the capacities of any woman as a modern well-trained nurse.

Oct. 15th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Prevention of the Spread of Consumption.

AT a recent meeting of the Health Committee of the City Council it was resolved to have printed for circulation handbills giving advice for the prevention of the spread of consumption. This, it is pointed out, is a disease which is said to be not inherited but contracted, and is therefore properly a preventable disease, though one of the most fatal, causing 1 death in every 10 in England. It is shown that it is almost always taken from a person who is suffering from the disease or through infected air, milk, and possibly meat. Intemperance, overcrowding, bad air, darkness, dampness, cold, sore-throats, &c., make people more liable to take consumption. The handbill gives directions in plain language for preventing the spread of the disease, and the coöperation of various associations and societies is asked to assist in making known the importance of the details noted.

Prevention of Cruelty to Children.

The tenth annual meeting of this society was held on Oct. 28th. The complaints for the year were 806, as compared with 725 last year—namely, general ill-treatment, 88; abandonment and exposure, 10; immorality, 7; neglect, 669; begging, 22; other wrongs, 9; and assault, 1. Of these there were convicted, 40; discharged, 3; warned, 620; otherwise dealt with, 111. Of these cases proceeded against there were, legitimate, 2135; illegitimate, 96; nurse children, 8; stepchildren, 27; other children, 27. The financial statement showed a remittance of £65 15*s.* 3*d.* from the branch to the central society, the number of subscribers on the books being 1214.

Hospital Sunday.

The amount collected at the various churches and places of worship on Hospital Sunday, Oct. 30th, is recorded at £5075 6*s.*, the proceeds this year going to the General Hospital.

Nov. 9th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University College, Liverpool: Medical School Building Fund.

THE fund which is being raised for new buildings for the departments of anatomy, medicine, and surgery has now reached the substantial sum of £13,000, thanks to the additional contributions of £5000 from Mrs. George Holt and Miss Emma Holt and £1000 from Mr. John Rankin. As only £4000 or £5000 more will be required to complete the necessary amount, the governors have asked that plans for the construction of the building may be submitted to them in order that the work may be proceeded with as soon as possible.

Honour for Professor Oliver Lodge.

The Rumford Medal of the Royal Society has been bestowed upon Dr. Oliver Lodge, F.R.S., the Professor of Physics in University College.

The New Professor of Midwifery and Gynæcology in University College, Liverpool.

Dr. Henry Briggs, the newly-appointed Professor of Midwifery and Gynæcology in University College, has had a very creditable record for hard work since his first appointment in 1877 as Demonstrator of Anatomy in the old Royal Infirmary School of Medicine, for which he was recommended by Sir William Turner of Edinburgh. After filling several minor but important posts he became connected with the Lying-in Hospital and the Hospital for Women, Shaw-street. He has devoted himself exclusively for many years to the practice of midwifery and gynæcology, and he has published some valuable contributions to the literature of those subjects. He is ex-President of the North of England Obstetrical and Gynæcological Society.

Hospital Sunday and Saturday Funds.

A meeting of the committee of these funds was held on Nov. 7th at the town-hall under the presidency of the Lord Mayor. The annual report and statement of accounts were adopted. The total receipts, including £405 brought forward from last year, amounted to £13,003 8*s.* 11*d.*, and the grants to the different charities amounted to £12,000. After payment of printing and advertising expenses there remained a balance of £490. The Saturday Fund exceeded the Sunday Fund by £102.

Medical Visitor to Licensed Houses under the Lunacy Act.

Dr. James Barr, physician to the Royal Infirmary, has been reappointed an additional visitor to houses licensed under the Lunacy Act within the city of Liverpool.

The Liverpool Select Vestry and Vaccination.

The Select Vestry at their recent meeting passed the following resolution unanimously: "That the Local Government Board be informed that the Select Vestry feel strongly the undesirability of wholly discontinuing in the parish of Liverpool the use of the public stations for the purpose of vaccination; and that the Board be requested to sanction the use of them by way of trial for a period of twelve months." The resolution arose out of the order of the Local Government Board to close the public stations on Dec. 31st, after which date the public vaccinators will be required to vaccinate infants at their own homes.

The Royal Infirmary and the Workmen's Compensation Act: Action at Law.

The committee of the Royal Infirmary have had to defend an action in the Liverpool County Court in which a laundry hand at the infirmary sought to recover from the trustees £300 for the loss of a finger and other injuries to the left hand which had been drawn into a steam wringer whilst she was in the respondents' employ. The plaintiff contended that a returned nurse's apron was sent to her and though she was on that day engaged in the ironing room it was not contrary to her duty to proceed to the washing room and use the wringer for the purpose she was doing. She admitted that it would not be her duty to wash or deal with the servants' aprons, which in due course would be washed at a different laundry and by different laundry maids. For the defence it was alleged that the apron which the plaintiff was attempting to pass through the wringer was an apron belonging to a servant at the infirmary who was then away on her holiday; that she had no right to go into the washing room, but she took the opportunity of it being the tea hour to hurriedly pass this apron through the wringer for her own purpose during the absence of the head laundry maid; and that in her haste she carelessly allowed her finger to become entangled in the machine. After the accident, upon an examination of the machine, the apron was found in it dry, and it was not a nurse's apron, as alleged by the plaintiff, but a servant's. The judge found for the defendants on the ground that the apron belonged to a servant, and that by passing it through the machine the plaintiff was not doing work for her employers but for own purposes and use. The defendants did not ask for costs.

Nov. 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

THE graduation ceremony on Nov. 3rd attracted a crowded audience, the undergraduate element being exceptionally strong. In view of recent events the occasion was anticipated with some anxiety both by the University authorities and the Students' Representative Council. The good sense of the majority, however, asserted itself, and though the ceremony was hardly conducted in a strictly orderly atmosphere the proceedings passed off successfully and with good temper. As is usual at this period of the year the medical graduates were not numerous. Six gentlemen received the degree of M.D., Mr. J. T. Biernacki, M.B., Mr. H. H. Thomson, M.B., and Mr. Alfred Webster, M.B., being respectively awarded "commendation" for graduation theses. Under the old regulations 13 candidates graduated M.B. and C.M.; whilst 18, according to the new style, received the degrees of M.B. and Ch.B., Mr. James Barrowman graduating "with commendation." Amongst the new medical graduates it is noteworthy that there are no less than 7 of the lady students from Queen Margaret College. The same college, too, supplied some very distinguished graduates to the other faculties. Thus, for the M.A. degree Miss Elizabeth Pettigrew Taylor graduated with first-class honours in mathematics and second-class honours in English, Miss Helen Rutherfurd with first-class honours in classics, Miss Helen Rule with first-class honours in English, and Miss Daisy A. M. Clark received the degree of B.Sc. in pure science. Quite a feature of the graduation was the hearty reception which the lady graduates received from the students.

Glasgow Philosophical Society.

The current session was opened on Nov. 2nd, when an address was delivered by the President, Dr. Ebenezer Duncan, on Recent Social Progress in Scotland. The address was a continuation of a former paper in which Dr. Duncan traced the ancestry of the Scottish people and maintained that they were more Teutonic than the English. To this strain he attributed certain of their virtues and on the present occasion he discussed the vices known to be specially associated with the Teutonic races—viz., drunkenness and sexual immorality. By an elaborate series of statistics arranged from many points of view he showed that together with a decrease in the consumption of alcohol per head of the population there had been a decrease in the number of deaths from delirium tremens and liver disease in Scotland, whilst an increase in the use of ardent spirits in England had been attended by an increase in the number of deaths from these causes. On the subject of sexual immorality Dr. Duncan, by taking the number of illegitimate births in various districts, argued that this was more common in those of Teutonic than in those of Celtic descent. Amongst both, however, there was decided evidence of improvement in recent years. Related to both the above considerations is the fact that pauperism in Scotland has much diminished during recent years, whilst insanity, if it has not actually diminished, has certainly not increased. In conclusion Dr. Duncan expressed the opinion that the growth of great city communities was likely to lead, not to a deterioration of the race, but to a higher standard of physical life and a nobler development of moral character. At the same meeting Dr. W. J. Fleming demonstrated a simple and inexpensive method of localising objects by means of the x rays.

University of St. Andrews.

Mr. James Stuart, M.P., has been unanimously elected Lord Rector of the University.

University of Aberdeen.

The opening address for this session at the Aberdeen University Medical Society was delivered by Professor Hamilton, whose subject was Self-help in the Study of Medicine. Professor Cash occupied the chair.—The University Assistants' Association has been reconstituted on a broader basis under the title of the Aberdeen University Association of Lecturers and Assistants, with Dr. John Gordon as President and Herr G. Hein and Dr. David Rennet, assistant professor, as vice-presidents; Dr. Murray is treasurer and Dr. Warrack and Dr. Findlay are members of committee.—The annual report of the Students' Representative Council shows that during the past year the total membership was 34, made up as follows: arts, 12; medicine, 15; law, 3; divinity, 2; and science, 2. During the year 12 meetings were held, and there is a balance in hand of nearly £36. Only two new students have entered the University Divinity Hall this session, and at the opening meeting of the Church of Scotland Students' Association Professor Cowan, one of the honorary vice-presidents, delivered an address on the Causes of the Diminution of Divinity Students throughout the Church. In the course of his address he said that not many years ago the number of licentiates was believed to exceed the Church's requirements, while at present attention had emphatically to be called to the fact that the supply was now too small for the need.—The bust of the late Mr. Charles Mitchell, LL.D., Jesmond Towers, Newcastle, a liberal friend to the University, was unveiled in the Mitchell Hall early this week. The bust has been presented to the university by Dr. Mitchell's son, Mr. C. W. Mitchell.

Aboyne (Aberdeenshire) Isolation Hospital.

It has been remitted to the chairman of the Deeside District Council and Dr. Watt, county medical officer, to report as to the propriety of enlarging this hospital, where cases of enteric fever had lately to be refused owing to the whole accommodation being taken up by scarlet fever patients of both sexes.

Morningside Hospital, Aberdeen.

At the close of the hospital year there were 69 adult patients (labouring under incurable disease). Steps are to be taken for the erection and maintenance of a children's wing, and a donation of £1200 from the Thurburn trustees has been set aside as the nucleus of a building fund. Meantime, two small wards in the main building, each capable of accommodating five cots, have been prepared for the reception of children. The whole expense of the institution is £25 19*s.* 5*d.* per inmate per annum, but there was a net deficiency on last year's accounts of £37 17*s.* 6*d.*, and an appeal to the public for further aid is made.

Nov. 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Academy of Medicine in Ireland.

THE opening meeting of the session took place on the evening of Nov. 4th, when the Pathological Section, under the presidency of Professor Purser, met at the hall of the Royal College of Surgeons in Ireland.

The Royal College of Surgeons in Ireland.

The Professorship of Midwifery and Gynæcology, rendered vacant by the resignation of Dr. Samuel Mason, is about to be filled by the Council of the College. Dr. H. C. Tweedy, Dr. More Madden, Mr. Andrew Horne, and Dr. Frederick Kidd are candidates for the office.

Belfast Maternity Hospital.

A public meeting was held on Nov. 2nd in the Town Hall (the Lord Mayor in the chair) in aid of the rebuilding of this old Belfast charity, which was started more than 100 years ago. It is entirely managed by ladies, and they propose first to build a new wing at a cost of £2000 and afterwards another building at a cost of £4000. There can be no doubt that the extension of the hospital is much needed both in the interests of poor women (as there is not by any means sufficient accommodation at present), and also as a most important factor of the medical school in Belfast, as it is in this institution in the main that the medical students receive their clinical instruction in midwifery. A lady announced that she had got a promise of £1000 provided the ladies themselves raised £2000. The ladies should aim at building a completely new up-to-date maternity hospital in Belfast.

The Public Health Committee of the Belfast City Council.

The City Council of Belfast have beaten all previous records for lengthened sittings. The November meeting began on the first day of the month and was devoted to the question of tramway extensions; the next day was all spent in an acrimonious discussion on the new city hall; while the most important question of public health was, as one of the

members of the council complained, relegated to the tail end of the agenda, and only came up on the third day, when the corporate fathers were thoroughly sick of the prolonged discussions of the two previous days. From the report of the medical superintendent it is seen that between Sept. 18th and Oct. 15th, 1898, the number of cases of typhoid fever notified was 636. The deaths from zymotic diseases were 191, while in the corresponding period of last year there were 76 deaths from zymotic diseases. The death-rate was 28·3 per 1000, while in the corresponding four weeks of last year it was 21·6. The death-rate from zymotic diseases was 8·2, while in the same period of last year it was 3·5. The chairman of the Public Health Committee was not present, but in his absence the vice-chairman said the outbreak of typhoid fever had been reduced within rather narrow limits, there having been only 8 fatal cases reported during the week. He also made an attack on "black sheep" in the medical profession for notifying cases of typhoid fever which they had never seen, but Councillor Browne, M.D., said he was sorry that some members of the medical profession had been referred to in such terms. He stated that not a single notification had been wrongly entered except in one instance, and that case he dared to say was a mistake on the part of the gentleman who was responsible for it. The latest returns of cases of typhoid fever notified during the week ended Oct. 29th were 98, as compared with 125, 149, 151, 172, 164, and 247 in the previous six weeks. It would appear that fees to the extent of £366 3*s*. 6d. were paid during the past three months for notifications and £1041 0*s*. 9*d*. were spent in disinfectants. I am very glad to be able to report that the typhoid fever outbreak is distinctly diminishing, but it is thought to be due to the prevalence of cold weather and the heavy rainfall and probably the putting of disinfectants down the drains is of very little service. To be sure, it looks as if something was being done, but why not grapple with the real difficulty—that is, have the sewers properly cleaned out—or have a complete new main drainage system, the present being admitted on all hands to be a complete failure? It does not even prevent flooding of certain parts of the city in heavy rains. Very possibly there is a good deal of truth in what Councillor O'Connell, M.D., a member of the Public Health Committee, stated in reference to Belfast, "It would be necessary to begin at the houses and end at the very efflux of the sewerage. This must be done, even if it did cost a lot of money"; and Alderman Lawther was quite correct when he said they would in future have to tackle the serious question of making the sewerage system of the city equal to its population, and if they wanted to keep pace with the growth of the city they must deal with the question of the sewerage of the future. The real risk is that once the typhoid fever scare is over the sanitary reformers in the corporation may be defeated in their most laudable efforts to introduce those reforms so absolutely necessary in Belfast.

Medical Men and Affidavits.

A curious case, of great interest to medical men holding public appointments, came before the Belfast Recorder on Nov. 7th in the local bankruptcy court in reference to the discharge of a man from the Belfast District Asylum. Affidavits made by Dr. W. Graham, resident medical superintendent of the asylum, and by the assistant, Dr. Patrick, to the effect that the man was now of sound mind and able to look after his own affairs, were read. Dr. Graham, in answer to his Honour the Recorder, said he was a public officer paid by the Government and that he had stated that his fee for giving an affidavit would be 3 guineas, and that his attending there (in court) would incur additional expense. His Honour said he had no right to demand anything and that it was his duty to attend there in court and make an affidavit stating the condition of the lunatic, that duty being paid for by the Government. Dr. Graham stated, in reply, he was only asking for what he would get in other courts. He had been a medical superintendent of asylums for ten years and he was only asking for what he received in his former county (Armagh). If he went to the prison, the Prison Board gave him 2 guineas; if he went to the military barracks he got 1 guinea; and the postal authority gave him 2 guineas. The present was the only case in which he had been asked to make an affidavit without a fee. He said he would be glad if the Recorder would communicate with the authorities in Dublin Castle (Dr. Graham's superiors), and inquire of them—he would be guided by their ruling—if he was asking for anything that was not customary, or getting anything to which they objected. The Recorder said this was a matter that he had nothing to do with. Dr. Graham's predecessor did not make such charges and he would follow his practice until he was controlled by a higher authority.

Nov. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Aneurysm by Injections of Gelatinised Serum.

IN THE LANCET of Oct. 22nd the communication of M. Lancereaux to the Academy of Medicine on the employment of gelatinised serum as a method of treating aneurysm of the aorta was published. At the same meeting Dr. Huchard opposed this treatment upon certain grounds. At the meeting of the Academy held on Oct. 24th Dr. Huchard returned to the charge and reported another case of death after this treatment in addition to the one he had mentioned before. According to him there is great risk of the coagulation produced by this method extending too far and being brought about too quickly; the gelatinised serum should be very weak—not more than 1 in 100; a stronger solution is apt to act too quickly and to be followed by a rise in temperature. Finally, at the meeting held on Oct. 31st M. Laborde pointed out that ordinary commercial gelatin, which, he supposed, M. Lancereaux used, is not entirely soluble. Its solutions always contain undissolved particles which, when injected act as foreign bodies and act as foci of coagulation. It is therefore not to be wondered at that these particles once introduced into the circulation should bring about coagulation in vessels more or less distant from the aneurysmal sac and thus bring about results which considerably discount the benefits of M. Lancereaux's treatment. The possibility of such accidents is by no means imaginary. They had been brought about experimentally after intravenous injection of the serum; more than that they had occurred in practice, as Dr. Huchard had shown at the preceding meeting. As it is obvious that gelatin does exercise a coagulative action the method is sound fundamentally, but it must be used with the very greatest care. The injection should be made into the aneurysmal sac itself or, failing that, as near to it as possible, absorption in the latter case being rapid owing to the development of the circulation in the vicinity of the aneurysm.

Obstinate Constipation relieved by Massage of the Hepatic Region.

At the meeting of the Academy of Medicine held on Oct. 31st M. Berne read a paper on a case of obstinate constipation occurring in a little girl, aged three and a half years, who had previously suffered from chronic muco-membranous entero-colitis. No drugs were found to be of any use and the condition eventually yielded to massage. On the eleventh day of treatment natural motions were passed, the patient's condition gradually improved, and by the thirteenth day the motions became quite regular, a condition which has lasted up to the present time. M. Berne considers that massage is a most useful method of treatment in cases of obstinate constipation, especially when employed in the region of the gall-bladder. Massage restricted to this region will relieve those cases of constipation which are accompanied by a deficient secretion of bile, and has the additional advantage that it can be performed in the cases of such patients as are unable to bear general massage. For instance, in a patient suffering from an abdominal tumour massage of the hepatic region will cause no discomfort unless, indeed, the tumour be in the hepatic region. Apart from constipation the method is useful in all cases of deficient biliary secretion.

The Surgical Treatment of Adherent Pericardium.

This treatment consists in the division or destruction of the adhesions. At the meeting of the Society of Surgery held on Oct. 26th M. Delorme mentioned that he thought of applying to cases of adherent pericardium the same treatment which he had devised for similar conditions occurring in the lungs. Functional troubles occurring in adherent pericardium are enough to enable a diagnosis to be made.

The complications accompanying this condition are exceedingly grave and very common; they include hypertrophy and dilatation of the heart, failing nutrition of the cardiac muscle, valvular troubles, and stenosis of the large vessels. Separation of the adhesions is often very difficult, especially in those patients of advanced age, so that the field for operation is practically limited to the young, who have greater resistant powers. The opening is made at the level of the fifth intercostal space. The pericardium is incised and the parietal layer being raised the right border of the heart is first freed, the operator working towards the lower border. It is necessary to stop at the level of the auricle, for the walls of this cavity are too thin to bear manipulation. The bands are divided either by the finger or by cutting.

Medical Aid and the Army.

The Minister of War has just taken a step which has been sharply criticised by the whole medical press. It has recently been decided that workmen employed in the military workshops at Toulouse should be entitled to free medical aid for themselves and their families. The Minister therefore applied to the medical men and midwives of the town, and in order to carry out his views as cheaply as possible he put up the office to auction in a way. Notices were posted up saying that medical men desirous of being employed in this manner should send in their names and the fee they should demand, either per case or by a yearly subscription. Preference, it was intimated, would be given to the lowest tender. This is the first time that a public body has sought to impose such humiliating conditions upon medical men—not even the clubs have hitherto done such a thing.

Dr. Lucas Championnière and the Prince of Wales's Fracture.

In an article in his own paper, the *Journal de Médecine et de Chirurgies Pratiques* of Oct. 25th, Dr. Lucas Championnière answers those who have criticised in the English press his opinions on fracture of the patella and his criticism on the way in which the Prince of Wales has been treated. He held to all his opinions as to the doing without an immobilising apparatus, which he considers harmful, and also as to the superiority of treatment by opening the joint and massage. He brings forward a case of complete cure which occurred in a little village of the Alps where the patient, a female, who had a very bad fracture, was massaged by her servant and had no surgical treatment whatever except advice from a military surgeon who happened to be passing through the district that day to take part in some military manœuvres. Dr. Lucas Championnière complains that some critics in certain English papers have made this a personal and international question, whereas for his part he only wished to look at it from a scientific point of view and in support of the trust which is put in this method of treatment outside France where it has very quickly become popular.

The Case of Dr. Boisleux and Dr. La Jarrige.

These two medical men, who were condemned about eighteen months ago on a charge of procuring abortion, have been set at liberty. Dr. Boisleux was working out his sentence in the prison at Étampes, where he had already attempted suicide twice. He considers he was in danger of getting general paralysis. The common report is that he will no longer practice as a medical man but is going to become a member of a large firm of surgical instrument-makers. Dr. La Jarrige, who is a brother of a general who some time ago retired from the service and died from grief, was placed in a *maison de santé* at Versailles on the plea of morbus cordis. After being set free he returned to Montreuil, close to Paris, where he practised formerly, and where he intends to continue, as everybody manifests the greatest sympathy for and confidence in him.

Nov. 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Death of the "Father of Seismology."

COUNT MICHELE STEFANO DE ROSSI, who made seismology a science by his work on "telluric storms" and his observatories, and the instruments of his own invention for forecasting the same, died last week in his château at Rocca di Papa in the Agro Romano. He was brother of the equally distinguished Count Giovanni Battista de Rossi, the greatest authority of his time on Christian antiquities, particularly as contained in the Catacombs. Count Michele in 1881 and again in 1883 predicted, weeks before their occurrence, the calamitous earthquakes in Ischia, but his warnings were unheeded by the hotel-keepers or rather kept dark lest they should scare away from the sulphur baths the numerous public which frequents them. With the Padre Denza of the Vatican Observatory, and Professor Luigi Palmieri of the Observatory on Mount Vesuvius, whose deaths in October, 1894, and in September, 1896, respectively, were noticed in THE LANCET, he contributed to earn for Italy the honoured place she holds in that field of Nature-study which concerns itself with the earth's crust.

Malaria Studies.

The Roman school deserves all the praise it received from Professor Koch at the close of his recent visit for its good work in the therapeutics of malaria. On this point Professor Koch bears effective witness. One evening last autumn among the admissions to the clinical wards of the Santo Spirito Hospital he saw a patient in the final stage of malaria perniciosa. Anticipating the man's death in a few hours he bespoke the body so as to proceed to the necropsy with the least loss of time. The request, as usual, was courteously granted and next morning Professor Koch appeared at the Santo Spirito Hospital, expecting to find everything ready for the post-mortem examination. To his astonishment he found the moribund patient of the previous day sitting up in bed, cured. Inquiring as to what had occurred to account for this quasi-resurrection he was told that the man had been at once subjected to the usual treatment in such aggravated cases—the intravenous injection of quinine as proposed and practised years ago by Baccelli—and that the response had been, as it generally was, quite satisfactory. With the chivalry which characterises him he hastened at once to the Ministry of Public Instruction and then and there congratulated Baccelli on the success of his treatment. A few weeks afterwards Baccelli himself, presiding at the Congress of Internal Medicine, repeated the anecdote in the course of an address on the contributions of Italians, not only to the therapeutics, but to the etiology of disease, malaria included. In this latter field they have been working steadily and silently and have obtained results only now becoming known. Profiting by the experience of Laveran, if not by that of Manson and Ross, Dr. Amico Bignami, *privat-docent* in pathological anatomy at the University, had in 1896 by observation and experiment convinced himself that malaria was a "disease of inoculation." The same year, working in concert with Dr. Dionisi, also of the Roman school, he experimented on the possibility of engendering malaria fever by means of the punctures of mosquitoes. Their experiments yielded no positive result, but were repeated in the August and first half of September (still in 1896), once more with a negative response. Dr. Bignami and Dr. Dionisi had failed to satisfy themselves, among the numerous tribes of mosquitoes, as to that one which had relations, mediate or immediate, with malaria. However, Dr. G. B. Grassi, Ordinary Professor of Comparative Anatomy, whose work in illustration and reinforcement of the Darwinian induction was rewarded two years ago by the Royal Society of London, succeeded last summer in completing a series of observations by which he ascertained and determined the mosquito tribes which had power to convey the disease. Italian medicine, already distinguished in the malarial field by the studies of Tommasi-Crudeli, Baccelli, Golgi, Celli, Marchiafava, and others, chiefly of the Roman school, expects to establish a claim to having made out the special tribes of malaria-conducting mosquitoes—tribes three in number and found exclusively in the fever-infected localities. I am further informed that Dr. Dionisi has discovered in bats a malaria-infection due to parasites closely resembling those found in the blood of malarious man. Here, again, a new field for observation opens up. Professor Koch, indeed, on his return to Rome next spring for the further prosecution of his researches, will find no lack of material provided by Italian colleagues for the checking or confirming of the conclusions at which he has provisionally arrived.

Nov. 7th.

Medical News.

APOTHECARIES' HALL OF IRELAND.—The following candidates passed in the First, Second, and Third Professional Examinations at the October examinations:—

Physics.—William Long.
Chemistry (including Theoretical and Practical).—Henry T. De Blacquiere.
Biology.—Henry T. De Blacquiere.
Second Anatomy.—John Thompson.
Physiology (including Histology).—John Thompson.
Hygiene.—M. A. O'Carroll.
Pathology.—M. A. O'Carroll.
Mr. John Thompson has completed the Second Professional Examination.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following candidates have been successful in the examinations for the diploma in State Medicine and Public Health:—

Honours Division.—W. M. H. Spiller, M.B., and H. K. Abbott, M.D.
Pass Division.—J. J. Brownlee, M.D., R. Cheyne, L.S.A., L.R.C.P. Edin., J. E. Dods, M.B. Edin., and J. G. Shea, F.R.C.S. Irel.

FOREIGN UNIVERSITY INTELLIGENCE.—*Vienna:* Professor Knoll of Prague has been appointed to the chair of Experimental Pathology vacant by the death of Professor Stricker.—*Breslau:* A new Anatomical Institute has just been opened. It is under the direction of Professor Hasse.—*Erlangen:* Dr. Friedrich Schneider has been appointed to give instruction in Odontology. — *Lausanne:* Professor Bourget has been appointed Director of the Medical Clinic and Professor Rabow has succeeded to the chair of Pharmacology.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the monthly meeting of the President and Fellows held on Nov. 4th, Mr. Henry Jellett, M.D. Dub., was admitted to the Fellowship of the College.

UNIVERSITY COLLEGE OF WALES.—The annual meeting of the Court of University College of Wales was held at the University College, Aberystwyth, on Nov. 3rd, under the presidency of Dr. Isambard Owen, the senior deputy chancellor. The Registrar reported that the number of candidates who entered the matriculation examination was 430, being 61 in excess of the number for 1897. There were 422 entries of candidates for the degree examination, being 137 in excess of last year. The congregation for the admission to degrees was afterwards held.

SALFORD ROYAL HOSPITAL.—The annual meeting of the Salford Royal Hospital was held on Oct. 26th. The number of patients treated in the hospital at the Pendleton Branch Dispensary during the year was 26,776, against 25,024 in 1897 and 25,558 in 1896. The officers of the District Provident and Charity Organisation Society had inquired into the circumstances of 12,685 applicants for medical relief and reported that 459 were in a position to obtain medical relief through the provident dispensaries or to pay for private attendance. The income for the year was £5447, rather more than that of the previous year, and the expenditure was £6477. There was a slight falling off in the annual subscriptions and the number of subscribers was given as 432, a very small proportion of the population of the borough. The lists of subscribers to the various charities in both Manchester and Salford show that giving is confined to the few. Though there are many wealthy people connected with Salford the majority of those living in the town itself may be called comparatively poor, yet a large proportion could give small sums and probably would be glad to do so if it were made easy for them, but they do not like their names with their small contributions to appear as a contrast to the larger sums given by their richer neighbours. The board thanked the promoters of the Manchester and Salford Cyclists' and Harriers' Charity Parade for the handsome contribution of £344 11*s.* 9*d.*, being the amount collected at the parade in September last. During the year the electric light has been introduced and efficient telephonic intercommunication established throughout the hospital. The medical report told of increasing work and the urgent need for more accommodation, especially for surgical cases. The Dean of Manchester suggested the advisability of asking various football clubs to devote the "gates" at some of their matches towards the funds of the hospital.

MEDICAL TOWN COUNCILLORS.—Mr. Paul Swain, F.R.C.S. Eng., has been elected a member of the Town Council for Plymouth. Mr. John Grant Wilson, M.R.C.S. Eng., L.S.A., J.P., has been returned for Monmouth.

BICYCLES FOR NURSES.—The Managers of the Doncaster Infirmary have already provided one bicycle for the use of the nurses during recreation hours and have now opened a subscription for another "wheel" for the nurses' use.

LITERARY INTELLIGENCE.—*The Medical and Surgical Review of Reviews*, a monthly magazine edited by Mr. Nathan E. Boyd, M.D., and published at Connaught Mansions, S.W., is a publication on the lines of Mr. Stead's well-known journal, but deals of course exclusively with medical and cognate subjects. The first number was published last month. As a guide to current medical literature the new *Review of Reviews* will be found extremely useful to busy practitioners and more especially with regard to foreign publications.

FREEMASONRY.—*The Rahere Lodge, No. 2546:* An emergency meeting of this lodge was held at Frascati's Restaurant on Tuesday, Nov. 8th, Bro. Burns, W.M., in the chair. Messrs. Coventon, Tucker, Gay, and Griffiths were elected members of the lodge and were initiated into Freemasonry. Dr. Roberts was elected a member, and Bro. A. M. Jackson, M.D. Oxon., was elected a joining member. Bros. Folliott, Christopherson, Mackintosh, Briggs, and Keats were admitted to the third degree. The brethren and their guests afterwards dined together.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Theodor Gsell-Fels, the well-known writer of handbooks for travellers, has died in Munich at the age of seventy-nine. He was Doctor of Medicine, of Philosophy, and of Theology, and published several scientific works on Balneology and Climatology, the best known of which, perhaps, is his "Baths of Switzerland."—Dr. Wilhelm Kochs, Docent of Physiology in the University of Bonn. He had published several researches on the physiology of the nerves and of respiration. His age was thirty-six. — Dr. Ewald Geissler of Dresden, one of the authors of the "Real-Encyclopädie der Pharmacie."—Dr. Bouchacourt, formerly Professor of Midwifery in the Medical Faculty of Lyons.—Dr. Morrison, formerly Professor of Physiology in Nashville, U.S.A.

PRESENTATIONS TO MEDICAL MEN.—On Oct. 28th Mr. T. J. Vallance, M.D. St. And., who recently resigned the post of medical officer to the West Ham Union Workhouse, was entertained to a complimentary dinner at the Langthorne Rooms by nearly forty of the officers connected with the union. Mr. W. A. Grogono, one of the senior medical officers, presided. In proposing the health of Dr. Vallance he remarked that his appointment as medical officer to the workhouse dated back as far as 1867 and during the whole of his thirty-two years' service he had been conscientious, kindly, and in good fellowship with his fellow workers, and on behalf of all the officers he had great pleasure in presenting Dr. Vallance with a liqueur stand, which bears the following inscription: "Presented to Dr. T. J. Vallance by the officers of the West Ham Union as a mark of their high appreciation and esteem on his retirement as medical officer after 32 years' service."—The occasion of the resignation of Mr. John Rees James, M.R.C.S. Eng., L.S.A., medical officer of the second district of the Neath Union and surgeon to the Cwmavon Copper Works, was taken advantage of by the inhabitants of the district to present him with a testimonial in recognition of his twenty-eight years' residence amongst them. The presentation consisted of three massive silver salvers, suitably inscribed, a purse of gold, and a pearl and ruby bracelet for Mrs. James.—Last week the Mayor of Swansea presented certificates to the successful candidates in connexion with the London and North-Western Railway (Swansea branch) of the St. John Ambulance Association and afterwards presented Mr. Edgar Reid, L.R.C.P. Lond., M.R.C.S. Eng., with an aneroid barometer as a mark of appreciation for his services as honorary lecturer to the class.

UNIVERSITY COLLEGE, LONDON.—Mr. Swale Vincent, M.B. Lond., M.R.C.S. Eng., has been elected to the Sharpey Physiological Scholarship (£150 per annum), which carries with it the post of chief assistant in the physiological laboratory. Mr. D. J. Armour, M.B., M.R.C.P., has been appointed to the vacant demonstratorship in anatomy.

DIPHTHERIA IN LONDON.—For the four weeks ended on Oct. 8th the notified cases of diphtheria in the county of London numbered 1039, a notable increase on the 699 notifications of the similar period ended on Sept. 10th, for the average number of 175 notified cases weekly of the earlier period rose to a weekly average of 260, the excess of the October period being in this way markedly shown. In the September period all the sanitary areas were invaded, but not one returned as many as 50 cases, whereas in the October period two sanitary areas escaped attack. Nevertheless, as many as five districts had each of them upwards of fifty attacks, with an aggregate of 346, as against a total of 9 in other five invaded localities. The registered deaths of the September period were 107 in number, giving a case mortality rate of 15·3 per cent., but while the fatal cases registered in the October period increased to 125 (or a weekly average of 31, with a minimum of 29 and a maximum of 34), the excessive number of attacks resulted in a decline in the case rate of mortality to 12·0 per cent. In the outer circle the registered deaths from diphtheria in the September period amounted to 39, and reached 50 in the October period, the weekly data being 11, 12, 17, and 10 respectively, of which 8, 6, 7, and 6, or 27 in all, belonged to the West Ham registration district. In the completed weeks that have since elapsed, the weekly deaths from diphtheria registered in the county of London have been 41, 30, 46, and 28, or 145 in all. In the outer circle the registered deaths have been 6, 9, 19, and 17, or 51 in all.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BEATTIE, JAMES M., M.A. New Zealand, M.B., C.M. Edin., has been appointed Assistant to the Professor of Pathology, University of Edinburgh.

BIGGS, S. T., M.B., B.Ch. Irel., has been appointed a Demonstrator of Physiology, Queen's College, Belfast.

BENNETT, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Workhouse of the parish of Liverpool.

CANDLER, J., M.R.C.S., has been re-appointed Medical Officer of Health by the Depwade Rural District Council.

COLE, J. W. E., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Bow Infirmary.

EVANS, H. M., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed an Assistant Surgeon for the Lowestoft Hospital.

EVISON, F. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the North Witchford Union, vice F. O'Conner.

GODSON, J. H., M.B., B.C. Cantab., has been re-appointed Medical Officer of Health by the Cheadle and Gatley Urban District Council.

HEPBURN, M. L., M.D. Lond., B.S., L.R.C.P., F.R.C.S. Eng., has been appointed an Assistant Surgeon for the Lowestoft Hospital.

HERMON, J. M., M.B., C.M. Edin., has been appointed a Medical Officer for the Crofton Sanitary District of the Wakefield Union.

LAVER, P. G., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Colchester Union.

LAW, DR., has been appointed Medical Officer of Health by the Macduff Town Council.

LOVEDAY, W. D., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Hundred Sanitary District of the Wantage Union.

MACKWEN, WM., M.D., C.M. Glasg., F.F.P.S., has been appointed a Corresponding Member of the Royal Medical Academy of Rome.

MAJOR, HERBERT C., M.D. Edin., has been appointed a Consulting Physician to the Bradford Royal Infirmary.

MORSE, EDWARD, L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health for Great Torrington.

PROCTER, G. L., M.B., C.M. Edin., has been appointed Medical Officer for the Dawley Sanitary District of the Madeley Union, vice C. B. H. Soame, resigned.

RICHARDS, H. M., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health by the Dronfield Urban District Council.

ROBERTS, R. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer or Health for the Cwmavon Sanitary District of the Neath Union.

SCHOLEFIELD, GEORGE E., M.D., D.P.H., has been appointed Medical Officer of Health to the West Lancashire Rural District Council, vice H. Peck.

SEQUEIRA, J. H., M.D. Lond., M.R.C.P., F.R.C.S. Eng., has been appointed Physician to the Tower Hamlets Dispensary, vice H. B. Donkin, resigned.

SIMPSON, G. A. G., M.R.C.S., has been re-appointed Medical Officer of Health by the Acton Urban District Council.

STARLING, E. H., M.D. Lond., B.S., F.R.C.P., M.R.C.S., has been appointed an Examiner in Physiology at the University of Cambridge.

TYSON, W., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Surgeon for the Lowestoft Hospital.

WILLIAMS, J. H., M.D., C.M. Edin., has been re-appointed Medical Officer of Health by the Flint Urban District Council.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM PROVIDENT DISPENSARY (SANDS COX TRUST), HOCKLEY BRANCH.—Medical Officer. Salary in proportion to the number of members, with a minimum of £250 per annum and residence.

BRADFORD ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board and residence. Also Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence. Also Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £140 per annum, with lodging. Appointee to board himself.

DERBY COUNTY ASYLUM, Derby.—Assistant Medical Officer, unmarried. Salary £100 per annum, rising to £120, with board, lodging, and washing.

DUNDEE ROYAL LUNATIC ASYLUM.—Medical Assistant. Salary £100, with board and lodging.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Physician.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Junior Resident Medical Officer and Registrar. Salary £50, with board and washing.

FINSBURY DISPENSARY, Brewer-street, Goswell-road, E.C.—Resident Medical Officer for one year. Salary £100 per annum, and a furnished residence provided in the institution, with attendance, coals, and gas.

GENERAL HOSPITAL, Birmingham.—House Surgeon for six months. Residence, board, and washing provided.

GLAMORGAN COUNTY COUNCIL.—Bacteriologist to work in the Council's Laboratory at Cardiff. Salary £250 a year. No pension is attached. Applications to the Clerk to the County Council, Glamorgan County Offices, Cardiff.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon for six months. Unmarried. Salary £20, with board and residence in the hospital. Also House Physician for six months. Salary £20, with board and residence in the hospital. Also Assistant Surgeon.

LIVERPOOL DISPENSARIES, 34, Moorfields, Liverpool.—Assistant Surgeon. Salary £80, rising to £90 per annum after the first years' service, with board and residence.

LONDON HOSPITAL, Whitechapel, E.—Assistant Surgeon. Also Medical Registrarship.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho, W.—House Surgeon for the Male Hospital. Salary £50 per annum, with board, lodging, and washing. Applications to the Secretary at Harrow-road, Paddington, W.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Convalescent Hospital at Cheadle for twelve months, unmarried. Salary £150, with board and residence.

MASON UNIVERSITY COLLEGE, Birmingham.—Lecturer on Osteology and Chief Demonstrator of Anatomy.

METROPOLITAN HOSPITAL, Kingsland-road, N.E. — Anæsthetist. Honorarium 25 guineas per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Two Visiting Medical Assistants for one year at least. Salary £120 for first year and £150 afterwards.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer, unmarried. Salary £110 per annum, with £10 annual increase, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and washing. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Assistant Medical Officer, unmarried. Salary £125 per annum, rising £10 yearly to £156, with board, lodging, and washing.

PARISH OF ST. JOHN, Hampstead.—Workhouse Medical Officer. Salary £150 per annum, and extra fees value about £40 per annum, subject to statutory reduction. Applications to the Clerk, Guardians' Offices, New End, Hampstead, N.W.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £40 per annum, with board, washing, and residence.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street, and 26, Hanover-square, London.—House Surgeon and Anæsthetist for six months. Unmarried. Salary at the rate of £100 per annum, with residence and partial board.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—Assistant Surgeon. Also Clinical Assistants, to be held for six months.

ST. PETER'S HOSPITAL, Henrietta-street, Covent Garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

SEAMEN'S HOSPITAL SOCIETY (*Dreadnought*), Greenwich.—House Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E. Salary £50 per annum, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Resident Junior Assistant House Surgeon. Salary £50 per annum, with board and washing.

STAFFORDSHIRE COUNTY COUNCIL.—Medical Superintendent for the Staffordshire County Asylum at Cheddington. The salary will commence at £500 per annum, with £200 in lieu of board. The asylum is not yet completed, and the successful candidate is to reside at the residence provided. In addition to the above salary the emoluments include a partly furnished residence, &c.—Applications to the Clerk to the Council, Stafford.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—Assistant Physician for the Out-patients for two years.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Gratuity £20, and board, lodging, and washing in the hospital.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Fourth Assistant Physician.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House Surgeon. Salary £120 per year, and £30 a year for Dispensing, with furnished apartment and attendance.

Births, Marriages, and Deaths.

BIRTHS.

BRAND.—On Nov. 3rd, at Driffield, E. Yorks., the wife of Dr. Brand of a daughter.

JACKSON.—On Nov. 4th, at Winchmore-hill, Middlesex, the wife of John W. Jackson, F.R.C.P., M.R.C.S., of a daughter.

LUMSDEN.—On Nov. 4th, at Lower Leeson-street, Dublin, the wife of J. Lumsden, M.D., of a daughter.

SANSOM.—On Nov. 6th, at West-end-lane, West Hampstead, N.W., the wife of H. Arthur Sansom, M.D. Lond., &c., of a daughter.

YOUNG.—On Wednesday, Nov. 4th, at 45, Stamford-hill, the wife of John Young, M.D., B.S. Lond., of a daughter.

MARRIAGE.

GARDE—BURROWS.—On Nov. 2nd, at the Church of the Holy Cross, Crediton, Walter Henry Ormond Garde, Surgeon, Royal Navy, to Ethel, youngest daughter of the late Surgeon-Major R. P. Burrows, Bombay Staff Corps.

DEATHS.

BARRY.—On Oct. 21st, 1898, at 10, Brompton-square, London, S.W., Julia, the dearly beloved wife of W. J. M. Barry, M.D., M.R.C.P. Requiescat in pace.

HACON.—On Tuesday, Sept. 20th, at Christchurch, New Zealand, suddenly from apoplexy, Walter Edward Hacon, M.R.C.S., L.R.C.P., L.S.A. Lond., aged 47 years, only surviving son of Edward D. Hacon, F.R.C.S., of Hackney, Middlesex.

PENNINGTON.—On Nov. 4th, at Lugano, Brigade-Surgeon Frederick Pennington, aged 68.

WOODHAMS.—On Nov. 3rd, suddenly, at Park-place, Gravesend, Sidney Woodhams, M.R.C.S., L.R.C.P. Lond., aged 34.

WYATT.—On Nov. 7th, at his residence, Clissolds, Shelly-road, Worthing, William Thomas Wyatt, M.A., M.D. Oxon., aged 44.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (19th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (14th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Cases:—The President: A Patient after Gastro-enterostomy performed for Pyloric Obstruction.—Mr. Openshaw: Excision of the Larynx.—Dr. H. Mackenzie: Vascular Murmur of Obscure Origin audible at the Base of the Right Lung.—Dr. S. Taylor: Aneurysm of the Right Carotid.—Dr. Hadley: Diabetes Insipidus.—Mr. Battle: (1) Recovery from Sarcoma treated after Coley's Method; (2) Genu Retrorsum; (3) Hepatoproptosis; (4) a Patient with Three Patellæ.

TUESDAY (15th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. T. Carwardine: Tumour of the Rectum.—Dr. W. Hunter: Thrombus on the Breast with Embolism of the Common Iliac Artery in the course of Enteric Fever.—Prof. J. R. Bradford: Carcinoma of the Gall Bladder without Gall Stones.—Dr. W. Hadley: Intrathoracic Sarcoma.—Dr. A. C. Latham: Multiple Abdominal Dermoids.—Dr. Freyberger: Embolism of both Middle Cerebral Arteries. Card Specimens by Dr. W. Hunter (Carcinoma of Gall Bladder) and Dr. Rolleston.

WEDNESDAY (16th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Exhibition of Thum's Slides of Diatoms mounted in High Refractive Media.

ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Papers:—By the Wind Force Committee: Report on Experiments upon the Exposure of Anemometers at Different Elevations.—Capt. D. Wilson-Barker: Comparison of Estimated Wind Force with that given by Anemometers.—Mr. W. Marriott: The Tornado at Camberwell, Oct. 29th, 1898.

THURSDAY (17th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchbourne-street, Edgware-road).—8.30 P.M. Dr. St. C. Thomson: Functional Dysphagia.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Paper:—Prof. Ramsay: Pure Anæsthetics.

FRIDAY (18th).—CHARITY ORGANISATION SOCIETY (Portman Rooms, Baker-street, W.).—4.30 P.M. Dr. Rayner: The Lunatic Asylum. (Course of Lectures on Medical Relief.)

EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Dr. F. Parsons: Half a Century of Sanitary Progress and its Results. (Presidential Address.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (14th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. H. Tilley: Demonstrations of Selected Cases (Ear, Throat, and Nose).

TUESDAY (15th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-sq., W.C.).—3.30 P.M. Sir W. Gowers: Degenerative Diseases of the Nervous System in relation to Causation.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Mr. J. Cantlie: Cases illustrating the Surgery of the Brain.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. P. Abraham: Scabies.—Bethlem Hospital, 2 P.M., Dr. Craig: General Paralysis.

THE LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Mr. A. Harbord: Syphilis—Treatment.

WEDNESDAY (16th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Green: The Symptomatic Treatment of Pulmonary Tuberculosis.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Air.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. W. A. Turner: The Methods of applying Electricity in Medicine.

THURSDAY (17th).—ROYAL COLLEGE OF SURGEONS.—3 P.M. Annual Meeting of Members and Fellows.

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum Cleveland-st., W., 5.30 P.M., Dr. G. Oliver: The Pulse.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. A. Routh: Gynæcological Cases. (Post-Graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Voelcker: Demonstration of Selected Cases.

FRIDAY (18th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. W. A. Turner: The Methods of applying Electricity in Medicine.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

***Lectures, original articles, and reports should be written on one side of the paper only*, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.**

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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HYPODERMIC INJECTION OF CARBOLIC ACID IN TETANUS.

IN the *Supplemento al Policlinico* of Oct. 15th Dr. Livio Metelli of Cologne Ortano, Brescia, publishes a case of recovery from tetanus under the hypodermic administration of carbolic acid, as suggested by Professor Baccelli. The patient, a farmer, twenty-one years old, complained to him on May 1st of difficulty in swallowing. Ten days before he had sustained a bruise of the right toe, which was healing but still retained visible traces of earth. After a lapse of twelve hours he was found to present the characteristic signs of tetanus—trismus, slight opisthotonos, spasm of the thoracic muscles, and a feeling of suffocation. He perspired profusely, his temperature was 38° C. (100·4° F.), and his pulse was 110. On the third day he had three injections of an ordinary Pravaz syringeful of 4 per cent. carbolic acid solution; this was repeated on the fourth and fifth days; on the sixth day he had in twenty-four hours five injections of a 5 per cent. solution. From that time he began to recover slowly, but the treatment of the sixth day was continued for fifteen days, the administrator being a member of the patient's family. Not the slightest symptom of carbolic acid poisoning was produced, and in fifty days the man was quite well.

SCARLATINIFORM ERUPTION IN INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I have lately attended a large number of cases of influenza of the usual types, but scattered through them, I have also seen some cases with a scarlatiniform eruption which was occasionally followed by desquamation. I shall be most grateful if any of your readers will tell me whether other observers have seen such eruption and desquamation in influenza, and if so what are the points of distinction between this influenzal rash and that of scarlet fever?

I am, Sirs, yours faithfully,

Nov. 7th, 1898. ERUPTION.

EUCALYPTUS GLOBULUS.

A CORRESPONDENT, Dr. Harry Benjafield of Hobart Town, sends us a communication in praise of the virtues of the Eucalyptus globulus. Although Dr. Benjafield is perhaps somewhat too enthusiastic in his praise we print the following extracts from his letter as we think they possess a certain amount of interest.

"..... Although Tasmania is the land where Eucalytus globulus grows everywhere it is the most popular of all remedies. One sees it in the homes of the wealthy citizen, who rubs his gout with the oil and puts it in his baths for any aches and pains he may have and uses it for a hundred other purposes. So much is this the case that the wife of one of our judges told me that in her house it had supplanted nearly all the old household remedies. Again, in the most remote bushman's hut it is invariably seen and he swears by it for pretty nearly every ill that flesh is heir to; if he gets a cold he sniffs it; if a cough he puts it into boiling water and inhales the steam; he rubs in the pure oil for lumbago and for fevers takes it on sugar. For sore legs he uses the green ointment, or failing that binds green leaves on the sore; and I frequently see cases which justify them in their belief. A huge Irishman some two years ago came to me with the smoker's sore on his lower lip as large and thick as a coat-button. As his age, appearance, and pains indicated epithelial cancer I ordered him to have it taken out at once before glandular enlargements made removal useless; and I considered it the more urgent as it had been growing for several months. Some three months after I met him on his cart and pulling him up demanded why he had not been to have it out. 'Begad,' says he, 'look for yourself if it isn't out.' I looked and saw a lip as sound as any lip could be. Then he told me that after leaving me he went to Dr. C——, who also told him he must have it out. Then he thought that before having it out he would try a box of green eucalyptus ointment upon it, and to his astonishment and delight it perfectly healed and the thickening disappeared under its use. To say that I was perfectly nonplussed is saying but little in explanation of my astonishment, as I felt perfectly certain that it was a case of true epithelioma, which I had never before seen disappear under any treatment. Suffice to say that I never now excise such a case without trying this green ointment upon it. ..... M. S., aged four years, who bumped her head against a frying-pan half-full of boiling fat and spilt a great part of it down over her face, ears, and shoulders. I saw her immediately after the accident and found her frightfully burnt, and in a short time the shock to the system produced coma. I made a mask of cotton-wool and soaked it with eucalyptus and olive oil, and enveloped the face, neck, and ears with it. The face rapidly swelled until eyes, mouth, and ears were scarcely visible. By evening the temperature rose to 105°, and coma increased. During the night the nurse, mistaking my directions, poured nearly a pint of pure eucalyptus oil on the dressings, and the following morning the patient was lower in temperature and improved in other ways, still for two or three days she hung between life and death. The eucalyptus and olive oil was the only dressing used and she recovered without a scar on the face and but one on the neck. I have always thought that the nurses' mistake saved the life of the patient."

Dr. Benjafield gives a warning against those purveyors of drugs who sell oil distilled from other varieties of eucalyptus than the globulus. Such oils, he says, are comparatively useless.

A MAN STRUCK BY LIGHTNING ON A RAILWAY TRAIN.

IN the Chicago *Railway Surgeon* of Oct. 4th Dr. C. F. Leslie of Clyde, Kansas, describes a remarkable case. A brakeman on the Missouri Pacific Railway was struck by lightning near Clyde, Kansas, on Aug. 2nd, 1897, and knocked from the brake on the top of a freight car where he was sitting at the time while the train was running at full speed. He was severely burned by lightning on the right side of his chest, on the right hip and buttock, and in the right groin. A

handkerchief which he wore about his neck was cut squarely in two and a portion of his watch and chain was melted by the lightning. He fell head foremost from the top of the brake to the ground, a distance of about 14 ft., the momentum due to the speed of the train being added to the fall. When taken up he was insensible and had two scalp wounds. He also sustained, as the symptoms afterwards showed, two distinct fractures of the base of the skull. Blood was running from the nose, mouth, and ears, and was also vomited more or less for thirty hours. The scrotum was nearly torn off, and there was a deep laceration five inches long in the right groin. The tissues here were burned black, would not hold stitches, sloughed in a short time, and subsequently healed by granulation. The scalp wounds and the burns on the body healed in a reasonable time. On the third day the symptoms of concussion had nearly subsided. He then began to take nourishment and to recognise friends, but he was entirely deaf. The hæmorrhage and serous discharge from the ears ceased on the tenth day. He made a good recovery, going back to work on Jan. 1st, 1898.

EMIN PASHA'S MEDICINE CHEST.

WE have received from Messrs. Burroughs, Wellcome and Co. a photograph of a most interesting "Tabloid" Medicine Chest which has just been returned to them by an officer of the Congo Free State, who recovered it from natives near Kenia in the Aruwhimi Dwarf Country. This chest formed the last medical equipment of Emin Pasha, Gordon's Governor of the Equatorial Soudan, and was supplied to him just before he started on his last expedition to Central Africa. The case accompanied him throughout his subsequent travels, and was taken by Arabs after his massacre at Kibungi in October of 1892. After passing through many adventures it was recaptured by Baron Dhanis, commandant of the Congo Free State troops, after the battle of Kasongo, in which the Congo Arabs were defeated. Emin Pasha's journal and a quantity of his property was recovered at the same time, but the "Tabloid" compressed drugs which had been in the chest were found to have been removed. The chest was subsequently stolen by natives and before its final recovery was used as a village treasury chest.

VEGETABLES GROWN ON SEWAGE SLUDGE.

"S. K. P." asks us if vegetables grown in large quantities of sewage sludge are dangerous as human food, and if so, why and to what extent. He makes the inquiry because in his locality the district council have acquired large tracts of land which they are as a matter of economy treating in the following manner. The earth, which is loamy clay, is dug in trenches about 3 ft. deep, into which is conveyed sewage sludge from which some of the liquid has been separated to the depth of about 2½ ft. It is then covered with a mixture of earth and dustbin refuse about 6 in. in depth—that is, until the field has a fairly level surface—and then it is planted with cabbages. He wishes to know if there is any doubt of the wholesomeness of food thus grown.

*** The depth at which the sewage sludge is placed (30 in. beneath the surface) is, we should imagine, too great to allow the cabbages to derive much manurial value therefrom, and also too great to allow of the rapid destruction of the organic matter in the sludge. The danger, if any, from eating cabbages grown in such a way must be entirely neutralised by the cooking to which they are subjected.—ED. L.

THE THERMOPSYCHROPHOR.

THE alternate application of heat and cold to the rectum has been used as a means of treatment in chronic prostatitis, and the thermopsychrophor is an instrument devised for this purpose. It has a tubular stem terminating in an enlargement through which alternate currents of hot and cold water circulate every quarter of a minute. The patterns hitherto in use have some inconveniences, and an improved instrument is described by Dr. Scharff of Stettin in the *Deutsche Medicinische Wochenschrift* of Nov. 3rd. In this pattern the stem is curved at a right angle and is connected to a three-way stopcock by means of a flexible tube surrounded by a wire spiral to prevent it doubling on itself. The other two tubes attached to the stopcock lead each into a reservoir of water of the proper temperature, which may be made to flow through the instrument most conveniently by gravitation, which failing, caoutchouc enema syringes may be used. The tubular stem has a lateral branch to carry away the waste water. The makers are the Medicinisches Waarenhaus, Friedrichstrasse, Berlin.

GONORRHŒA OF THE UTERUS AND ITS APPENDAGES.

IN a paper read before the Philadelphia Medical Society and published in the *Philadelphia Polyclinic* of Oct. 8th Dr. Anna M. Fullerton, of that city, remarks that gonorrhœal inflammation when once established in the vagina usually becomes quite obstinate and is very serious because of its liability to extend to the uterus and its appendages, giving rise to that form of pelvic inflammation which is beyond all comparison the severest. The uterus and appendages may be so changed in structure through the effects of this poison as to be a constant source of ill health. Gynæcologists at first thought it sufficient to remove the appendages when thus diseased, but as the uterus, which had been the avenue of transmission of the poison, was found to be liable to subsequent attacks of inflammation incited by the gonococci and as a uterus without appendages was of no use, the practice came into vogue of removing the uterus as well as the appendages. A strong reaction has of late come about against the total removal of ovaries, but in actual practice the conservation of the ovary has been found to lead to the necessity for numerous secondary operations. As illustrating "the futility of attempting conservative work in at least this class of cases" Dr. Anna Fullerton gives details of 8 patients suffering from gonorrhœal inflammation of the tubes. She removed all the appendages in five instances and one ovary in the sixth.

PROTECTION OF ICE CREAM CONSUMERS.

AT the meeting of the Manchester City Council on Oct. 26th Alderman McDougall adverted to the Corporation Omnibus Bill which was to include the power of framing regulations for preventing the sale of "diseased" milk, and said that in view of the large quantities of milk used in the city for the manufacture of ice cream a clause should be added which would provide that ice cream makers and vendors should be under the same supervision as milk dealers. A resolution in favour of this was passed. In view of the revelations made from time to time of the conditions under which this substance is sometimes concocted, the proposed supervision will not be deemed unnecessary.

Electricity.—"Medical Electricity," by Lewis Jones, M.D., F.R.C.P. (London: H. K. Lewis). This is on the whole the best book on the subject in a small compass. The illustrations representing patients with paralysis of certain muscles or groups of muscles are very valuable. "A Manual of Practical Medical Electricity," by Dawson Turner, M.D., F.R.C.P. Edin. (London: Baillière and Co.), is also a very useful book and contains a chapter on the X Rays. Of larger treatises there are Erb's Treatise in von Ziemssen's Handbook of General Therapeutics, and Beard and Rockwell's Medical and Surgical uses of Electricity. As for apparatus there are many firms, and our correspondent will find no difficulty in selecting one. It would be invidious on our part to particularise.

Izal.—We cannot possibly recommend our correspondent to break the literal wording of his bond. If he agreed not to practise within a radius of a certain number of miles until after the lapse of a certain time he must adhere to his agreement. The arrangements surrounding the practice at B—— are not such as to induce us to alter our opinion.

M.D.—The matter is one upon which we see no very good reason to comment, for the patent preparation is not called by the medical man's name, and in the abridged description sent to us from the local paper the fact that the patentee is a medical man is not mentioned.

L.R.C.S. and P. (*Pilsley*) has omitted to say what appointment it is concerning which he is inquiring.

G. L. K.—The matter is not without difficulty. We will write.

The substance of *H.B.'s* letter has been forwarded.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 10th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Nov. 4	29·91	W.	0·09	81	57	42	42	44	Fine
,, 5	29·76	S.W.	...	90	61	44	49	51	Cloudy
,, 6	30·05	W.	...	71	56	44	44	45	Hazy
,, 7	30·07	S.	...	96	56	44	48	49	Hazy
,, 8	29·97	S.E.	...	72	56	46	47	48	Hazy
,, 9	30·17	E.	...	65	60	48	51	52½	Foggy
,, 10	30·04	E.	...	56	54	52	52	53½	Foggy

During the week marked copies of the following newspapers have been received: *Malton Gazette, Dursley Gazette, Western Press, Birmingham Post, Harrogate Advertiser, North Wales Chronicle, Times of India, Pioneer Mail, Essex Telegraph, Derby Times, Citizen, Scotsman, Builder, Sussex Daily News, Yorkshire Post, Midland Counties Express, Newcastle Leader, Architect, Bradford Observer, Eastern Post, Staffordshire Chronicle, Dover Express, Huddersfield Examiner, Liverpool Daily Post, Leicester Post, Glasgow Herald, Folkestone Express, Cambridge Express, Dundee Advertiser, Bristol Mercury, Brighton Gazette, Sanitary Record, Essex Telegraph, Doncaster Chronicle, Mining Journal, Hertfordshire Mercury, City Press, Reading Mercury, Local Government Chronicle, Local Government Journal, Kent and Sussex Courier, Argus (Melbourne), Free Press (West Bromwich), West Bromwich and Oldbury Chronicle, Surrey Advertiser, Guy's Hospital Gazette, Weekly Free Press and Aberdeen Herald, South Wales Echo, Manchester Guardian, Leeds Mercury, Civil Service Gazette, Bridgwater Independent, Leek Times, Craven Herald, Bristol Times, Loughborough Monitor, Leamington Courier, Warwick and Warwickshire Advertiser, &c., &c.*

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